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In an attempt to bridge the gap between the newly emerging knowledge of career development and the technology of vocational counseling, a workshop was conducted for the purpose of disseminating the recent advances in career development to a group of university professors engaged in counselor education. The major presentations, printed here, consisted of: (1) recent methods of modifying traditional teaching-learning relationships; (2) recent findings from the career pattern study; (3) recent developments and prospects in occupational fact mediation; (4) sociological aspects of career development; (5) the psychology of time utilization; (6) recent findings collected by the American College Testing Program and the National Merit Scholarship Corporation; and (7) the disadvantaged and vocational development. The presentations and the deliberations of the participants resulted in attempts to translate the many facets of career development theory and research into implications for counselor education. The first set of implications is expressed in a group of essential understandings that are highly recommended for inclusion in all counselor training programs. The second set of implications takes the form of detailed suggestions for incorporating the understandings in training programs for counselors. (Author/IM)

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Implications of Career Development Theory and Research for Counselor Education

Workshop Report
June 11-23, 1967
Teachers College, Columbia University
New York, New York

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FOREWORD

The report contained herein is admittedly an inadequate representation of the events it attempts to document. Those events and the experiences they stimulated are impossible to capture, to save and to pass on in a way that would satisfy any of us who lived through them.

We began with a problem--or what the workshop planners thought was a problem--and put the minds and energies of 50 interested people to the task of searching for a solution. The ensuing 14 days were exclusively devoted to searching. Designated experts offered their ideas and engaged in protracted discussions with the participants. Groups of counselor educators met together to discuss their reactions. Individuals worked alone, in libraries, to catch up on the materials they had never been exposed to before and to reconstrue materials that were being put into new perspective.

Through all the searching for meaning ran the sense of obligation to produce a product. And though the obligation was for sane a worrisome thing, they kept at it. That product is included in what follows. Yet most participants agreed that the value of the workshop was not expened in this product. Instead it takes form in their own increased awareness about career development theory and research, in their augmented array of resource materials, and in the changes they are making in the training programs to which they contribute.

Roger A. Myers
Workshop Director

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OVERVIEW

Implications of Career Development Theory and Research for Counselor Education

Purpose: Recent advances in career development theory and increased activity in career development research have provided a substantive base for revisions in the strategies, techniques, and procedures of vocational counseling. Clearly the traditional concept of an occupational choice made at one point in the life of the client no longer represents the most effective way to view the process. Increased knowledge has made it clear that one's work life must be viewed as a series of points at which choices must be made as one proceeds through the several positions and occupations which eventuate in his career. Enlightened decisions about work alternatives can no longer be thought of as a task only for the adolescent or young adult but must now be viewed as a recurrent demand, confronting the student and worker at various stages in his life span.

In spite of these developments, field observations indicate that corresponding changes in the practice of vocational counseling are generally not taking place. By and large, counseling practice still proceeds on the traditional strategy of matching men and jobs. Methods and instruments of counseling continue to reflect the absence of the newer developmental thinking about the problem. In an attempt to bridge this gap between the newly emerging knowledge of career development and the technology of vocational counseling, a workshop was conducted for the purpose of disseminating the recent advances in career development to a group of university professors engaged in counselor education.

The group worked toward a set of adaptions, or guidelines therefore, for use in counselor education.

Details: The workshop, supported by the U.S. Office of Education, Bureau of Research, Division of Adult and Vocational Research under grant number OEG 1-7-061886-2984, was conducted at Teachers College, Columbia University, from June 11 to June 23, 1967.

Participants: Forty-five faculty members in counselor education, representing universities in twenty-four states and Puerto Rice were the participants. A list of participants is provided in the final pages of this report.

Process: The Core of the workshop consisted of seven half-days devoted to the major presentations and the discussions that followed them. The participants were divided into four groups: (1) those interested primarily in the education of elementary school counselors; (2) those interested primarily in the education of high school counselors; (3) those interested in the education of counselors for colleges; and (4) those interested in the education of rehabilation counselors. Eleven half-days were devoted to meetings of these groups. Group members sought to integrate material from the major presentations, developed reading assignments for themselves, and worked at framing the implications for counselor education. Some of these eleven half-days were devoted to individual library research. Three half-days were spent in plenary sessions wherein the small groups reported to each other on the progress of their study and their deliberations.

Major Presentations: Alan B. Knox gave the first major presentation which was designed to open the topic of dissemination of recent knowledge. From his specialty in adult and continuing education he provided the participants with recent methods of modifying traditional teaching-learning relationships.

Donald E. Super presented some recent findings from the Career Pattern Study and from his recent research in self-concept measurement. The presentation and the discussion which followed stimulated the participants to request multiple copies of the Career Pattern Study monographs and his monograph on Career Development: Self-Concept Theory (see Workshop Resources).

Stanley J. Segal, who with E.S. Bordin and Barbara Nachmann recently proposed a psychoanalytic frame of reference for career development, presented a paper on time utilization and its meaning for work and leisure. His ideas were highly attractive to the participants who used them as vehicles for more existential views of career development.

David V. Tiedeman prepared the group by requesting that they read his (with Robert O'Hara) monograph on Career Development: Choice and Adjustment (see Workshop Resources). He then presented a paper written by him and Gordon A. Dudley which dealt with their theoretical notions about the use of occupational facts as part of the newly developing Information System for Vocational Decisions. The appendices to the Tiedeman and Dudley paper are especially useful.

Seymour Warkov introduced the sociologist's view of career development, illustrating his approach with detailed examples of his own research. His presentation led to participants' requests for multiple copies of several resources, especially James Davis' Great Aspirations and Undergraduate Career Decisions.

John L. Holland's presentation focussed on the many kinds of data he and his colleagues at the National Merit Scholarship Corporation and at the American College Testing Program had collected. Participants were invited to consider the data and propose interpretations and they responded vigorously.

Finally, Martin Hamburger presented challanging ideas and conducted a lively discussion that called into question the relevance of all that is known about career development. His commitment to the problems of the disadvantaged and his skepticism about the efficacy of approaching them with traditional career concepts provided a disquieting end to the major presentations.

Implications: The presentations and the deliberations of the groups resulted in attempts to translate the many facets of career development theory and research into implications for counselor education.

The first set of implications is expressed in a group of essential understandings, or categories of topics that are highly recommended for inclusion in all counselor training programs. The categories include:

The Structure of Society
The Nature of Work and Careers
The Modigying Effects of Individual Differences
Career Development and Personality Development

The second set of implications take the form of detailed suggestions for incorporating the understandings in training programs for counselors. Separate sets of suggestions are provided for secondary school counselor training programs and for college counselor training programs.

Innovations in Teaching - Learning Relationships

Alan B. Knox
Professor of Education
Teachers College, Columbia University

As I understand your workshop purposes, they are to engage in the extensive and complex task of examining current research, and then to explore implications for your counselor education programs; focusing on how the ideas of theory and research can be implemented. I propose to discuss another type of innovation; the processes by which you design learning experiences for your graduate students, that will effectively facilitate transfer of what they study to professional practice.

I want to limit my comments to a few major aspects of the teaching-learning transaction. I focus on the preparation of "scholarly practitioners" instead of researchers and scholars. I assume that the major part of your programs will continue as they are with major emphasis on subject matter courses, counseling and related fields, practicum experience, etc. I will concentrate on "bridge" learning experiences which encourage the graduate student to move back and forth between knowledge and relevant research to experience.

The central aspect of your graduate programs are those in which changes in knowledge, skill, and attitutes are blended into increased competence. My task will be to suggest approaches to the design of teaching-learning relationships that have been prevelant in the field of continuing education which appear to have implications for your curricular revisions. The following series of brief descriptions is intended to illustrate the range of possibilities from which you might select and combine for the purposes of an individual course. These are not necessarily to replace what you are doing now, but might be added to it.

These approaches can be described within four somewhat different settings.

(1) Individual study, in which the relationship between teacher and learner is on a one to one basis.

(2) Temporary group situation, in which a group of people who did not know each other previously, meet together, and in time go their separate ways, e.g. a workshop such as this.

(3) Organizational setting, in which the members of the group have been in contact with each other prior to the beginning of the educational program. In such a setting, account must be taken of the network of interpersonal relationships previously established.

Because what is learned will be applied in the interpersonal setting the extent to which you understand that interpersonal setting can effect the program you use.

(4) Community setting, in which the educational program involves people who live in the same neighborhood but who may belong to different organizational structures within that community, e.g. community development programs where two or more organizational groupings (business and labor, or different ethnic groups) are brought together in educational program to examine what divides them and what unites them.

I suggest that there are approaches to learning which are appropriate to these specific groups or settings. I am also concerned with these special applications for "in service" education programs.

INDIVIDUAL SETTING

This is the setting in which you as teacher and the people who are your learners are working on a one-to-one basis. The counselor role is one of three mentor roles; the other two being teacher before a group and writer who is mentor through media. These three mentor roles are applicable in the individual setting.

Use of New Technology. With new technological advances (closed circuit TV, videotapes, etc.) the interpersonal relationship between teacher and student is becoming increasingly expanded even though the learner may be thousands of miles away; it is a one to one relationship via some media. With the increasing availiability of video tapes on campuses, this becomes a useful technique in keeping record of what has occured which is increasingly important as we realize the significance of non-verbal communication. For use in your programs this seems exceedingly important.

Readers Advisory Service. This makes it easier for the library patron to make contact with the rich source of resources available to him, and also helps the individual with the skills which can make these resources more accesible.

TAB Test. This has been explored for teaching diagnostic skill in medical training. The procedure is as follows: information is gathered and coded to provide all the information which one could reasonably expect to extract about this individual. The doctor or person in training is provided with this information. He then proceeds to ask questions until he feels he has enough information to make a reasonably sound diagnosis, then suggests some sort of remediation. Finally it is revealed what actually happens to the patient and if his prescribed diagnosis and remediation is correct. This procedure provides a very useful approach to the training of people to be more effective diagnosticians.

Correspondence Course or Home Study Course. This allows the individual to pursue a plan of study which does not require direct interpersonal contact. The use of recording equipment and other technological innovations for this purpose is increasing. Simultaneous broadcast can also be used where 8 or 12 programs can be broadcast on the same channel at the same time. Also the use of television with equipment in connection with the telephone is being explored. So recordings, television, and radio are ways of supplementing the correspondence course, and are a further way of achieving some of the objectives of your counselor education programs within an interpersonal setting and free your time and your students time.

TEMPORARY GROUP SETTING

This setting consists of a group of persons who have had no previous contact and who meet for a period of time.

Listening Panel. This is most applicable to a large group. An important competence of the effective counselor is the ability to listen. This procedure involves the use of a group of students as a listening panel during a lecture, film, etc. Their task is to be particularly attentive to what is being presented and to reflect what they heard back to the group.

Interview. This is a procedure in which the instructor interviews some of his students with regard to some of the materials being treated and does so in front of the whole group. You may ask questions of a few students regarding what they have been studying or reading. This can be done with other faculty members or persons who have a particular competence to share. The information extracted may be far more to the point than that produced by someone who stands up in front of the group and talks.

Student Led Discussion groups. The primary purpose is not to have the discussion leader become a "little lecturer" nor to present new information. Rather, this method is to be used in instances where it is presumed that the students have access to the information. The purpose is to help the student relate this knowledge to his own previous experience and background and to his feelings about what he now knows.

Role Playing. In a protected setting the learner can benefit from playing both counselor and client roles. Benefit may be primarily to the student who is playing the client role, as in developing empathy.

Brainstorming. This technique is called creative imagination, encouraging the individual for a period of time to suspend judgment; to recognize that creative and effective action involves both identifying fruitful and useful alternatives and carefully weighing alternatives and coming to a considered judgment. In many fields we become over-socialized in the use of critical judgment to censor very quickly new ideas which seem to be unusual. So this is a gimmick for setting aside critical judgment and considering new and possibly useful ideas or hypothesis------ thinking up all the possibilities even though they seem bizarre. The chance is still there to select out the best and most usable. Some of the limited research done regarding this activity suggest first that if a group of people engage in this activity for an hour, that the number of useful, good, effective ideas that come out in the first half-hour.

It is not required that a group do this--it can be engaged in by a person all by himself.

Sensitivity training. This has been used successfully with management groups, administrators, teachers, etc. Primary concern is with the affective domain; trying to help people become more sensitive not only to other people and their feelings, but also to themselves, to how they are perceived and to the impact they have on others. The relevance of this for counselors is obvious, although it is controversial.

ORGANIZATIONAL SETTING

Here the influences of continuing interpersonal relationships need be considered. The persons have had contact prior to the educational program and will continue to have it following the program. These prior relationships provide a basis for moving rather directly into discussion. (One might avoid certain topics or discussions because of knowing the history of grief which these have led to in the past or because of difficulties that a topic is associated with in the culture of these individuals.) In most cases such people will be associating with each other in the very setting in which you hope they will apply what they have learned. I am sure many of you have learned of some new ideas in a program then have back home tried to apply these only to run into a brick wall. One of the advantages of the organizational setting is that what you do in the educational setting can take into account what is back home because you have the people from back home together in the program.

Work teams. This procedure builds the educational program around teams of people who will be working together back home, and the objectives of what they are going to do are geared to that particular work team. The concern is not only with increasing the individual competencies of the members of the work team, but also with exploring the ways in which they can accommodate and put into practice the new ideas and procedures that they have gleaned from the program.

Action research. In action research the primary focus of research activity is not only evaluation, but also involving the people who must make some changes in the evaluation procedure. If the research outcomes are to be implemented, it works well to involve in the research the people whose practices and behavior are to be effected by the outcomes. This seems particularly relevant with your graduate students as they are working on their internships and actively participating in other programs.

Demonstration Project. Within the context of the work situation in which your students are engaged, they set up a domonstration in which they take some of the ideas they are dealing with in their graduate programs and test the feasibility of these ideas in practice.

COMMUNITY SETTING

Field trip experiences. Field trips which might involve a block of time of days or weeks providing first hand contact with different groups in the community have been very effective.

Such trips can include the home and neighborhood situations in which their clients live, as well as the policy and administrative structure of the organizations of which they are a part. Exposure to other people or organizations with whom the clients have contact's also valuable.

Neighborhood counseling center. This is an exercise in which your students might work as part-time counselors, in a setting some distance removed from any educational institution. In it the primary task for the counselor is not to sit at his desk and wait for someone to come to him, but rather to have extensive contacts with people who live in that area and within the settings in which they operate jobs, church, recreation halls, etc. The primary concern is to make contact with a segment of society that would not walk into the middle class context of most counseling settings. Contact with the person who needs help or information is initially made on an informal basis.

Relationship networks. A useful technique is the study of the network of relationships between the counselor and the other segments of the community with which he will have contact in the future. For example relationships between counselor and persons in the other two mentor roles - teacher and writer can be studied. Also people in support staff positions, such as psychometricians can be objects of study. Furthermore, people who are performing counselor roles in different settings, and administrators who influence counselors can be studied.

Action Seminars. These work best with people in the middle echelons of responsibility--the citizens, or the persons in elected public positions. The group in a siminar setting spends the initial time identifying a number of problem areas with which they are especially concerned, and then dividing into task forces to investigate further. Seminars include the use of faculty or persons who have particular contributions to make to the area. People who are now doing what they would like to see done better can also be used. On the basis of such a seminar students prepare "white papers" to express their best effort to analyze the relationship between theory and practice. This experience should be shared with the people who have operational responsibility. Such sharing can lead to an evaluation of why what can be done, is not being done at an optimum level, exploring the defense of existing practices.

In conclusion let me make two points: First, I have attempted to amplify the important role of the student in directing and planning his learning experience. This can lead to greater congruence of objectives between you and your students. But even more important is the contribution this can make to the students' subsequent ability to perform the mentor role himself after he leaves graduate study-to become increasingly a self-directed learner and to learn how to continue to learn and to adapt effectively after he leaves the preparatory program.

Secondly, my comments are directed not only to preparatory programs but also for use in the continuing education program. By what you do, you prepare your students for their life-long professional task of engaging in educative activities, but also for continuing education of your graduates as professional workers. Continuing education is an expanding area in many professional fields, and in some cases fields other than education are outstripping education itself in these activities.

What I have outlined this morning are ideas that I feel are particularly important to continuing education.

Recent Finding from the Career Pattern Study

Donald E. Super
Professor of Psychology and Education
Teachers College, Columbia University

I want to talk today about three aspects of my recent and current work in vocational and career development; the first to put things in perspective, and the other two in greater detail.

First, briefly, is the use of trait and factor theory. We like pigeon holes and like to be able to say that someone is a "trait and factor man," or a "self-concept man," etc. But these are always over-simplifications. No one theory of vocational development or no one theoretical approach to vocational development is really sufficient. Human behavior and society are very complex, and if you are to succeed in constructing and using theories or vocational development, it is because we seek to achieve some synthesis or overarching theory which will incorporate elements of theory which come from these sometimes seemingly antithetical approaches. We need trait-and-factor theory, we need self-concept theory, we need life stages and career pattern theory and other theories. A comprehensive theory will be made up of segmental theories.

I do want to concentrate then on life stages and career pattern theory, and then on self-concept theory. The basic notion of life stages is a concept we are familiar with in developmental psychology. I found it useful because it does provide for the notion of development, as contrasted with trait-and-factor theory which has implicitly a static notion.

Life stages of growth, exploration, establishment, etc., bring in the notion of development. The person is growing and maturing as a result of interaction with his environment. We recognize that what the individual brings to his experience, what the environment has to offer him, and the interaction of these two lead to development.

In the College Board monograph (Super, Starishevsky, Matlin, & Jordaan, 1963) you will note that I have broken down the exploratory stage into three parts, suggestive of Ginsberg's work and supported by the findings of the Career Pattern Study. These three substages are the *tentative*, the *transitional*, and the *trial*. This is an attempt to define the kinds of exploratory behavior that goes on between the ages of 14 and 18. This is a time when many high school students do have vocational preferences, perhaps frequently changing, but they do formulate preferences. And these preferences are best viewed as the basis for exploration.

The young adolescent needs help in understanding the tentativeness of these preferences. We all have occasion to say to high school students, "It's alright for you not to know what you want to do now." The important question is, "What are you doing that will help you to find out when you do need to know?"

The tentative substage is exploring in a way which involves really no commitment at all. But as one moves through the exploratory period there is an increasing degree of commitment. When a high school graduate applies for a job there is a little more commitment. But society knows, and the youth knows himself, that this is not necessarily a lifetime job that he is applying for at age 18. He is frequently made aware that he is too young for some of the things that he might want to do. Implicit in this notion is a kind of promise that later on he will be old enough, and it will be possible for him to enter a particular field. This makes it clear that many peoples' first jobs cannot be jobs involving commitment. So the commitment made in the transitional and/or trial substage is a minimal commitment.

As the individual moves from the exploratory period to the establishment stage, the degree of commitment increases and the person goes through a process of stabilization; he resigns himself to something he is doing or he commits himself to something that he has the opportunity to do.

The follow-up interviews at age 25 for Career Pattern Study subjects drove home this idea of the degree of commitment rather strongly. For example, the young boy who went into construction work, and originially saw it as a means to setting aside capital to be able to do something else, realizes by age 25 that he is not able to set aside the capital and still live the way he does, so there is an increasing commitment to construction work--a kind of resignation. A more positive adjustment is that of the young man in construction also, who does set aside the capital to buy his own truck. In this way he can establish himself, and he has begun to stabilize. These notions of degrees of commitment, following exploration, loom particularly important.

In the second monograph, Vocational Maturity of Ninth Grade Boys (Super & Overstreet, 1960), the factor analysis showed that in the 9th grade the main ingredient of vocational maturity seems to be planfulness. In adolescence the youth tries out a number of things. The value of his trials and exploratory activities depends upon his planfulness and orientation to his experience. One result of good planning and meaningful exploration is increasing commitment to the whole objective.

The notion of evaluation is implicit in exploration and planning. Logically, if a person plans and tries, the next step is evaluation. One measure of vocational maturity then may become evaluation--the degree to which he has planned, tried out and then examined his trial experience. My own thinking is now in terms of a cycle of planning, exploring, and evaluation. On the basis of evaluation the cycle may begin over again, involving more planning, exploring, evaluating. As one goes through the cycle many times, there is an increasing degree of commitment. This has implication for vocational counseling and it certainly fits into the model of vocational counseling whether we have explicitly stated it or not.

Developmental tasks. In the Career Pattern Study initial formulations, the notion of Havighurst's development tasks has been helpful. The developmental task is what underlies the notion of stages; life stage is an age or a period in which one is dealing with a set of vocational developmental tasks, and a set of societal expectations. As one moves from one stage to another, societal expectations change. This brings us into the notion of role theory. The developmental tasks a person encounters are based partly on his own individual characteristics, i.e. his IQ, social status, age. These are the attributes that cause us to expect things of people. We say for example, "He is old enough to be earning a living." The developmental task is achieving economic independence assigned by age and status.

Some of these expectations of age depend on the situation in which the person with attributes finds himself. The developmental tasks of adolescents in the 30's were different from those of today. Society does not expect one to achieve the same things under those two different systems.

Havighurst has made use of the idea that coping adequately with the tasks of one stage is essential for advancing to the next. This is a useful notion in vocational development. Vocational maturity is a function of the tasks with which the person is coping and the method that he is using in coping with them. The notion of developmental tasks justifies the kind of notion we have for vocational maturity and the measures we have used.

We asked, is the ninth grader aware of the developmental tasks that ninth graders have to deal with? Is he thinking about the choices he is going to have to make? Is he relating past experiences (work experiences) to his vocational goal? How is he dealing with these?

What are the measures that were somewhat disappointing at the ninth grade? One was the "independence of vocational experience." This dealt with not only the present work experience, but also of the quality of that work experience.

Did he get the job himself or was it handed to him? Was he working in a highly structured situation or did he structure it himself? With this kind of measure, the most independent or mature (if it was maturity) was a boy who at the age of 14 had his own chicken farm and egg route. He was completely independent and self-directing in his work, so he received a high score on independence. But unfortunately this scale was not related to anything else.

One of the findings of our ninth grade studies was that many of the measures that working counselors have thought to be related to vocational maturity are not really related to each other or to anything else. Planfulness was the only thing that was related. One of the findings that is emerging from the study of the high school years is that some of these measures that did not have construct validity in the ninth grade do have some in the 12th grade. For example, being "realistic" in choices may have meaning in the 12th grade even though it does not in the 9th grade. The implication is that we need to rethink our behavioral expectations of teenagers. We need to make more use of the idea of exploration and not apply wisdom, realism, or independence prematurely, that is not apply them until an appropriate stage.

Our last follow-up was in 1962-63 when the boys were about 25 years old. (We get educational and work history data every two years. The next major follow-up will be in 1972). Our concern at age 25 is with the criteria of success. We are interested in relating the conventional and unconventional measures at grades 9 and 12 to the status at age 25. But how do you judge success, status, or whatever, in a framework of vocational development? Many criteria are static. Many studies have used "occupation engaged in" or "earnings" but these are legitimate only if we assume that that status is an appropriate one for a person for the rest of his life, not recognizing that statuses change as the person gets older or as the economy changes. E.L. Thorndike's study (1931) predicting vocational success had a devastating effect because Thorndike said that apptitude tests do not predict vocational success. But one reason why E.L. Thorndike got negative results was because his criterion of success was earnings, and the subjects were 22 years old. It is obvious that status is still indeterminant at age 22 and earnings are not what they will be 10 years later. As a matter of fact, at that age the earnings scale is almost inverted, with semiskilled persons earning more than those who elect higher positions. The condition creates the problem of why should one remain in training or as an apprentice when he can make more as a semiskilled worker. What I am saying is that earnings and most of the criteria we use for success are not adequate for young adults in their 20's.

In the Career Pattern Study we have worked toward finding more appropriate criteria. We have attempted to develop career criteria rather than occupational criteria. We have looked for measures of success that will reflect progress in one's vocational development, since presumably progress in development is what is in order at that age. On the basis of the studies that have been made on work histories and career patterns, we classified career behavior into five different categories:

1. Floundering- trial and error (with emphasis on error); moving but without knowledge of where.
2. Trial- (emphasis on trial, although error may be involved). Person may have an idea of what is appropriate for him to do and he may give it a trial, realizing that it could be right or wrong, and if wrong move on to the next thing.
3. Stagnation- floundering in one place, i.e. staying one place, getting nowhere, but doing nothing about it.
4. Establishment- staying in one place because it is an appropriate and meaningful place.
5. Instrumentation- doing something which may be irrelevant but which will lead one to where he wants to go (instrumental behavior), e.g. dishwasher who is employed inappropriately, but this enables him to go to school.

How valid is this set of categories? They are derived from logical analysis of the study of work histories. We have related them to other career criteria.

Our second line of research has the development of scales of career development. In dealing with the scales we have actually quantified movement using scales of equity and goodness of fit.

Everytime a person makes a vocationally related move he gives up something and gains something. Therefore one can make judgements of whether he increases or loses equity. Is he using his education better or worse in the new job? Has he increased or decreased his security? An engineering student who drops engineering and moves to business administration loses equity. He has to backtrack to pick up lost credits. He loses engineering credits. He loses time and money. But an engineering student who graduates in engineering and gets a job as an engineer, increases his equity, he "cashes in" on his training. These judgements can be applied to both educational and vocational moves.

One can also judge whether the occupation to which a person moves is one in which he uses his ability and interests and finds outlets for them more so than in a previous occupation?

Or is the fit the same or a poorer fit? The work history can give indications of increases and decreases in goodness of fit, and one can get a global measure of progress. These are the recently developed scales for quantifying career development. Elizabeth Gotkin, a doctoral student at Teachers College, has reported some preliminary work with these scales indicating that there is considerable agreement of the assessment of careers by these two different methods. The career development scales tend to give results similar to the more global and judgemental method of classifying behavior according to floundering, trial, etc.

One of the findings of the Career Pattern Study that makes theoretical sense is that there is a good deal more floundering behavior in the years immediately following school than there is at age 25. By the time people reach age 25 about 2/3 of them are beginning to be established. An encouraging fact is that most of those who start out without floundering continue not to flounder; some people appear to be well oriented to begin with and their moves from that point are systematic. So while most persons flounder less as they approach 25, some have not floundered at all during those years.

I would like to remind you of some of the older work on career patterns. It actually started as more of a sociologists or economist's way of looking at career behavior--stable, conventional, unstable, and multiple-trial career patterns. In Psychology of Careers, (Super, 1957) I did some guess work about the career patterns of women (no one had yet analyzed them) and I suggested a somewhat more complex set of categories of what women's career patterns might be like, based on the analysis of men and on my own observations. Mulvey did a study of the career patterns of women which fairly well substantiated my a priori categorization. I mention this by way of pointing out that we do now know more about the career patterns of women than previously.

Turning to further research which has been done, Gribbons and Lohnes have replicated some aspects of the Career Pattern Study in developing what they call readiness for vocational planning scales, which are similar to some of the vocational maturity scales. They have attempted to refine some of the notions of career patterns to describe the career movements of adolescents and young adults. Their monograph will appear in the series of Career Pattern Study monographs soon.

Self-concepts. One reason for becoming involved in self-concept theory was a feeling of inadequacy in dealing with the growth stage. As I looked at the literature on early developmental stages, it seemed to me that in the early years (elementary school and possibly the first two years of Junior high) the most important elements of vocational development are the attitudes about self as a worker or person who fulfills certain roles. It also seemed that vocational information at that stage is not the same as the information that is appropriate at the high school level. Vocational information during the growth stage is a matter of identifying with or not identifying with work role models. Therefore self-concept theory and the ways individuals develop attitudes about themselves in relation to others seemed to me the clue to understanding vocational development in the preadolescent years.

Another reason for self-concept theory having considerable appeal was that, like life stage theory, it helped to bridge the gap between an other-oriented, counselor-oriented use of trait-and-factor theory and a subject- or client-oriented approach. Self-concept theory sees the individual as a perceiver and organizer of perceptions, and as a decision maker on the basis of how he sees things. Self-concept theory helps put the individual in charge of his own career. So the elements of self-concept theory in vocational development are the elements of how people develop ideas about concepts of self.

Now let me review some of the research we have been doing with self-concept theory. We have been working primarily with college students or adults. Soon we will have a monograph on what we have been referring to as the "translation process." This process says that a person chooses an occupation on the basis of his perceptions of the similarities of his attributes to the attributes required by the occupation. Essentially the person makes a series of "I am" statements, and a series of statements about people in occupations. Seeing himself and occupations in these terms he is aware of "goodness of fit"--that he would be among people of his own kind or dealing with people who are congenial, etc. He may be wrong, he may not have insight into his own personality or his abilities, or he may be guided by occupational sterotypes which are inadequate. But it is still, according to theory, these perceptions or misperceptions which are the basis of his decisions. If he sees things too inacurately he will not be able to act at all.

In Bingham's (1966) study of the translation model, he hypothesized that teachers who go to NDEA guidance institutes to become counselors will see themselves as resembling counselors more than they see themselves resembling teachers. Data were gathered from several year-long institutes around the country. He was also interested in the effects of training.

Occupational sociologists and psychologists have been applying the term socialization to vocational guidance. The notion is that a program of professional preparation will socialize a person to the field; he will take on the attitudes, values, etc, of people in that occupation. So another hypothesis was that counselors in the institutes should see themselves as even more like counselors at the end of the year than they did at the beginning of the year, and perhaps less like teachers.

Some of the theory was supported by Bingham's findings. The new counselor trainee at the beginning of the NDEA institute saw himself as resembling a counselor more than he did a teacher. However, the agreement between his self- and counselor-concepts was no greater at the end of the year than at the beginning. This raises some interesting questions: When people make decisions such as this have they already gone through "anticipatory socialization?" Another finding which was puzzling was that the concepts of self and teacher in counselors agreed more than did the concepts of self and and teacher in teachers. Bingham had groups of teachers who had no intention of becoming counselors and teachers who had given up teaching to become counselors. The self-concepts of the counselors were more like their concepts of teachers than was true of the teachers. To put it another way, the counselors were better teachers than the teachers (assuming that matching of self- and teacher-concepts makes good teachers).

This raises some more questions: Is the counselor really a person who is an educator at heart and therefore sees himself resembling teachers too, although he sees himself as resembling counselors more? Is the typical teacher not a teacher at heart, but only there because he did not know what else to do?

Since time is short, I will mention only one more study for illustrative purposes. Daniel Kawakami (1967) brought together some of Festinger's thinking on cognitive dissonance and self-concept theory in occupational choice. He used the first semester experiences of engineering students as the laboratory situation to create cognitive dissonance. When students got feedback that they are not doing as well as they thought, what does this do to their self-concepts, ambition and so on? The main conclusion was that the laboratory definition of self-concept and of dissonance did not work in the natural setting. This further implies that we need to do considerable refinement in applying dissonance theory to occupational self-concepts.

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Recent Developments and Current Prospects in Occupational Fact Mediation[1]

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The Subsumption of Media by Mediation

From Media to Mediation. Our Conference host, David Pritchard, originally invited Tiedeman to report on recent media developments associated with the presentation of occupational information. He demurred from Pritchard's initial suggestion, however, because, upon hearing it, he realized more clearly that mediation, not media, is the central focus for education. The turning of occupational facts/data[2] into information is a personal and educational process. Therefore, the important question in relation to media in occupational information is the means by which media actually prove to mediate the personal educational process. We elect to address herein the most important of our questions in vocational guidance; namely, how may we better the personal educational process associated with vocational development?

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[1] Speech, National Conference on Occupational Information in Vocational Guidance sponsored by the U.S. Office of Education, Chicago, Illinois, 17 May 1967.

[2] Occupational facts/data come in two conditions, fixed and modifiable. We therefore elect to adopt the cumbersome term, "facts/data", to indicate this fact throughout the paper. Occupational facts are directly recoverable without mediation except for storage and later recovery. On the other hand, occupational data must be additionally processed by the numeric and/or linguistic routines of a mediation system.

Shortly after Tiedeman's conversation with Pritchard, he had a confirming experience with a recent book by McLuhan and Fiore. The younger of his sons left his copy of this book on a table in their living room for about a week but he was not particularly interested in it because, during his early glances at it, he kept reading its title as The Medium is the (Message). That seemed a clever, though not an intriguing, title. One day it suddenly came to him that the book's title is actually The Medium is the Massage (McLuhan and Fiore, 1967), not the Message. His double take and that realization connected then with his realization that he had agreed to speak to you on mediation. Thus, a hurried turn to the book reinforced his recognition that, in occupational information as well as in the generality of communication treated by McLuhan and Fiore, the media are not the message. In fact, media can never be the message; only the facts which media convey are the message. The media themselves only become important in message transmission when they actually mediate transmission - when they actually massage the occupational information process as persons are exposed to occupational facts/data.

Epistemology and Pedagogy in Mediation. We introduce these experiences of Tiedeman's, namely those with David Pritchard's initial invitation and with the McLuhan and Fiore book, in order to place our report on recent media developments within a conceptual framework on which we had both been previously working independently but now find that we can herein express collaboratively.

We feel that our new common framework is of considerable importance in determining the significance of current work in media development. Why?

The point of view we outline in this paper is one which derives important aspects of its validity from being realized again and again through a wide range of personal experiences with facts and ideas. We try today to give you that important personal experience of discovery, insight, and acquisition because you can if you try really understand yourself as a process. Our "frame of reference" with regard to the interplay of facts, ideas, purposes, and action represents what we understand Polanyi to mean when he speaks of personal knowledge; that is, a form of orientation which, while it cannot be specified in the abstract, serves in any given context of personal encounter to articulate immediate concerns with issues of broader relationship and relevance (Polanyi, 1958). Therefore, in order to articulate aspects of our immediate topic within a context of issues of broader educational concern, we shall address ourselves herein to two assumptions which we consider implicit to much of the work in this field today - assumptions which, however, we consider to be inconsistent both with crucial principles of educational process and with the rationale of one of the developments to be reported, namely, the Information System for Vocational Decisions (hereafter ISVD) project.[3] We state these assumptions now so that we may substitute in later sections their inconsistency both with present work and with the IDVD. It is the alternatives to these principles that you will find us building into the ISVD.

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[3] Principal Investigators in the Information System for Vocational Decisions are Russel Davis, Richard Durstine, Allan Ellis, Wallace Fletcher, Edward Landy, Robert O'Hara, David Tiedeman, and Michael Wilson.

The first of these assumptions pertains to the nature of knowing and the known. There are current applications of recent media developments to issues of vocational information which appear to presume that facts, data, or information consist of bits of knowledge which correspond directly to that presumed to be the real, the true and the knowable. In brief, knowing and the known are presumed by these efforts to comprise a direct, linear relationship, both in the abstract and as we realize them as dimensions of particular circumstances. An acceptance of this assumption invokes an epistemology stemming from the great English Empiricists, Hobbes, Locke, and Hume and in our sciences finds perhaps its most thoroughgoing implementation through the rationale and methods of those guided by logical positivism. It represents, however, a position of which we shall show the serious limitations as we attempt to implement our current technological resources in the service of personally-determined career development.

The second of the assumptions is in an important sense subordinate to the first, for it pertains to the nature of the relationship between acts of knowing or learning and those of teaching or counseling. This assumption suggests that, on the basis of a "correspondence" theory of knowledge, we can presume to select those aspects of the known and knowable which shall be most effective in determining a subsequent course of events toward an end that we value and which, as "means" toward that end, we call "learning." In brief, the assumption here is that we can determine, in advance, both goals and procedures appropriate to the educational process in its distinctive human immediacy and variability.

These two assumptions, one "epistemological," and the other "pedalogical," are inconsistent with what seems to be one of the most crucial principles of our own current work, namely, that both knowledge and the process of knowing are functions of a personal and collaborative context of exploration and confirmation - a context which is itself defined by a nexus of human purposes expressed both overtly and covertly, both tacitly and articulately. The alternative position from which we speak suggests that our talk about media cannot look in one direction only. It cannot look solely toward facts, data, information - in isolation from persons and processes. In short, we hold that the reciprocal interaction between the knower and known entails a "transactional" perspective and array of procedures more aptly denoted by the notion of mediation. The final turn of this argument is that, because of the interplay of the tacit and articulate dimensions of knowing in the personal act of learning, the experience of mediation is that of a massage. In other words, we inevitably encounter the new with a habitual tensing of our intellectual musculature, with the result that its meaning takes initial form after that which we have long known and accommodated ourselves to. Only after we have worked with (and perhaps more importantly still, been worked on by) a new possibility do we relax to the point of seeing more clearly that something new has indeed been going on in, as well as around, us /cf. Piaget (Flavell, 1963) on assimilation and accommodation/.

Our advocated perspective is "transactional" by virtue of the implication that both processes of teaching and learning are construed as individual and collaborative acts of "sampling", from among a wide range of on-going events (both personal and environmental), those configurations of meaning and implication which best serve to differentiate means and ends, processes of imagination and structures of knowledge, and acts of discovery and principles of verification. Within this "transactional" perspective facts, data, and information derive their significance as exemplifications of meaningful coherence among stable dimensions of events reflecting multiple principles of order (Neisser, 1963). It is this transactional perspective regarding the interplay of information and imagination which brings our ideas in harmony both with current developments in discovery teaching and the "new" curricula (Bruner, 1966) and with the "new" self-knowledge and creative learning developments (Kubie, 1958). It is, in sum, a point of view from which we risk inviting the student to take advantage of our capacity to learn through his ability to teach us.

You are provided in the handout a summary of recent media developments associated with the presentation of occupational information (see Appendix A). This is the particular summary which David Pritchard originally wanted us to provide. Therefore, we accommodate his need but by way of your later reading, not present listening.

We are now thereby free to devote the balance of our report to tracing the emergence and implications of our "transactional" or "mediating" perspective regarding those developments. This point of our view has never before been reported. In presenting our point of view for evaluating the application of media to issues of occupational information within the context of personally-determined career development, we shall stress three "facts," namely:

1. The subordination of the concept of media to the concept mediation implies that, in relation to occulational information, media represent means in the service of vocational development. Thus the first "fact" to be developed more fully is that of occupational mediation in relation to the cultivation of vocational development.
2. The concept of vocational development as the goal of occupational mediation raises the issue of personal responsibility and involvement in the determination of those ends. This is the second of the "facts" within the context of mediation to be considered.
3. Finally, a discussion of vocational development and occupational mediation within the context of formally organized educational structures raises issues with respect to broader implication and implementation. Thus the third "fact" to be discussed is our responsibility and opportunity to consider means by which mediation of

vocational development can be more effectively accomplished for all citizens of the United States through the engagement of systems and structures beyond those formally organized for educational purposes.

Vocational Development as Goal of Occupational Information Mediation

Vocational Development. The past twenty years mark profound change in vocational psychology. Ginzberg and colleagues seemingly led us into this new era with their book on the process of occupational choice (Ginzberg, Ginsburg, Axelrad, and Herma, 1951).

Although the Ginzberg study received the most attention in the beginning, the study was itself also a part of an emerging elaboration of the concept of vocational development by Donald Super. Super began the incorporation of the psychology of adjustment into the psychology of vocational choice just prior to World War II. His consultation with his Columbia colleagues during the Ginzberg study seemingly helped him to crystallize this union of vocational choice and adjustment and to formulate that union in 1953 as a theory of vocational development (Super, 1953). Super followed his 1953 statement of vocational development theory by numerous papers, several monographs, and his book The Psychology of Careers (1957). Super's theory of vocational development is by now solidly foundational for practice.

Super's original basis and theory in vocational maturation is now also being consolidated and expanded by Crites (1965) who is developing an elaborate series of scales in vocational development and an extensive plan for further investigation of the possibility of turning vocational development into vocational maturation. Gribbons (1959) has also given us a scale of vocational feadiness as a part of vocational development. Gribbons and Lohnes (1966) have also already theoretically and empirically linked several important vocational consequences to vocational readiness during the high school period of life.

Vocational Choice. These three lines of research in vocational development itself have been coincident with three sister lines of research in vocational choice. The research in vocational choice is characterized in its broadest outline by the work of:

1. Cooley who contributed his overlapping, longitudinal study (1963) of the development of scientific careers, Flanagan and Cooley (1966) who have carried on Cooley's initial efforts at prediction of educational and vocational choices in relation to the analysis of Project TALENT; and Shea (1964) who has carried on Stoffer's interest in educationally breaking the social inheritance of occupational behavior.

2. Roe (1956) who related categories of occupations to the variations of personality and intelligence in our society, Holland (1964) who extended that work and derived scales of personality which convey later membership in occupation to some extent, and Campbell (e.g. Campbell and Johansson, 1966) who is engaged in modernizing the concept of interest as inventoried by the Strong; and
3. Bordin, Nachman, and Segal (1963) who enunciated a need satisfaction framework for the mediation of vocational memberships in personality development.

Vocational Self Concept and Career in Personality. The further differentiation of theory in vocational choice according to the concept of vocational development finds strong expression in research on vocational self concept. Some of the better delineated lines of research on the harmonization of personality and work through the development of a vocational self concept are those of:

1. Super and associates (1963) in which the meta-dimensions of self concept are being defined and studied;
2. O'Hara and his students (1967) in which the development of self awareness through attention to vocational choice has centrality;
3. Harren (1964) in which pragmatic means for studying the Tiedeman and O'Hara (1963) stages in development of educational choice and accommodation have emerged;

4. Matthews and Friend (in press) in which the specific development of vocational behavior in the personality development of women is at issue; and
5. Lofquist and associates in which specific hypotheses from their general behavioral theory of vocational choice and adjustment (Dawis, England, and Lofquist, 1963) are being tested.

In modern vocational psychology the development of career in personality finds union also with the concept of socialization, with revised educational practice in relation to the "new curricula", with studies of the organization as a specific sociological unit, and, finally, with the total economy as a frame and vehicle of vocational and career behavior.

Vocational Maturation: A New Goal in Occupational Fact Mediation. Clearly, we have moved far beyond the vocational psychology of World War II which was primarily based on the prediction of success and/or satisfaction in educational and vocational opportunities. Vocational choice is now nested into vocational development, vocational development into self concept and personality development, personality development into curriculum development and socialization, and finally organization and economy are emerging as two powerful forces occurring in interaction with individual initiative to forge vocational identity.

If you share our conviction that we presently have both an enlarged and a sound basis for theory in vocational development, then we trust that the following two conclusions will have credibility for you, namely:

1. We presently have a new goal for occupational information, that of *vocational development,* not mere occupational entry and success; and
2. Our enlarged understanding of vocation in personality now gives us social as well as individual means whereby we may "massage" those research facts of vocational development which we have sketched for us in the interest of more fully helping persons turn those facts into occupational information for themselves. When persons do so they move toward *vocational maturity*. Vocational maturity is a goal we expect that persons will accept on a personal basis.

Personal Responsibility for Goal Determination During the Mediation of Occupational Facts/Data: Needed structure of Authority in Turning Development into Maturation

Personal Responsibility and Vocational Maturity. The previous section concluded with statements that vocational development has become an appropriate goal for occupational information and that the theory of vocational development is sufficiently advanced to give us a new concept of what we actually need to mediate, namely, vocational maturity.

We know, and our critics keep insistently drawing our attention to the fact, that the society, its economy, and its organizations help persons to harmonize initiative and efficiency during the course of personal evolution in vocational identification and personality development. However, we counselors and other educators still have a staunch interest in cultivating individualization during the course of the socialization of that collaborative activity known as work. Our resolution on this score brings personal responsibility for goal determination into the mediation of occupational facts/data and maturation into fore as goal of vocational development. Personal responsibility for goal determination is a necessary part of personal development through the educational process. Therefore, it must remain a central index of our success in bringing the goal of vocational development into the mediation of occupational information for the purpose of cultivating vocational maturation. Let's now attend to this fact more carefully.

Personal Responsibility and Pedagogy. The strategy for cultivating personal responsibility during education has one of its foundations in the pedagogy of discovery teaching such as Bruner (1962) recommends. In discovery teaching, goals and structures which are originally those of the teacher are offered to students with expectation that the student will incorporate them into his own response repertoires. This pedagogy recognizes that the process of incorporation mediates the responsibility of the student as he takes a structure known to another and makes it his own.

During this process the student himself discovers the teacher's structure, thereby achieving insight into the subject which the teacher offers him for his understanding.

The pedagogy of discovery teaching tutors the student in seeing a teacher's understanding of a phenomenon in relation to the teacher's own desire to share that understanding with him. This pedagogy expects that there will be a placing of shared goal determination into the awareness of the student. It also offers the student practice in determining specific, personal goals within a general set, or range, of goals permitted by the structure of the teacher's subject as well as by the personality of the teacher involved in letting another learn by himself within broad limits defined by the teacher.

The pedagogy of discovery teaching opens the door for individual action during learning. However, the application of goal determination to other areas of living involves the assumption of initiative in goal determination in the absence of a pre-determined set of possibilities. This is the process of generalizing a discovery pedagogy upon which counseling focuses. The matter of choice becomes central in personal goal determination.

Guidance in Education and Vocational Maturity. Tiedeman recently applied the above analysis of the functions of guidance in education (Tiedeman, 1966) to an analysis of the general choice conditions inherent in the process of maturing. The results of this analysis led him to emphasize that choice involves the bearing of the predicament of commitment with tentativeness (Tiedeman, 1967).

In this analysis of the paradox of choice conditions, he differentiated two central issues. One central issue surrounds the actual assumption of responsibility to relate oneself to future opportunity as if there is an avenue of possibility and responsibility available to one. This issue Tiedeman calls that of choice determination. The second central issue is his analysis of choice conditions deals with the evolution of goal, given the assumption of responsibility to choose. This condition he refers to as that of goal determination.

Tiedeman's recent writing on the understanding and bearing of the choice paradox as a central and critical part of self development represents a culmination of the work he initiated with O'Hara in 1963, work which itself produced the monograph, Career Development: Choice and Adjustment (Tiedeman and O'Hara, 1963). In that monograph, he and O'Hara analyzed career development in relation to a model of decision-making. Since that time, Tiedeman has himself worked with subsequent students, Frank Field (Tiedeman and Field, 1965) and Gordon Dudley (Dudley and Fletcher, 1965) to delineate a way in which he could argue for the articulation of decision-making structures in individual lives without threat to the individual right of goal determination during process of personal decision-making. Tiedeman believes that he now has a logical system which is both possible and appropriate. The system is that of mediation as we develop it here today.

A Structure of Educational Authority Appropriate for Vocational Maturation. The central part of our position is that the cultivation of understanding of decision-making in the paradox of living takes place in an educational context. In the educational context involving the discovery pedagogy the responsibilities for efficiency and initiative can be divided between counselor and teacher.

The teacher has prime responsibility for the goals of accuracy and discovery with particular respect to the subject he is assigned to teach. The teacher is only secondarily interested in the emergence of insight on the part of his student during course of discovery as well as in growth in understanding of self-as-process under expectation for personal responsibility in learning.

The counselor on the other hand has primary responsibility for seeing that the goals of insight and self-as-process emerge in the context of discovering a subject at school and in generalizing this awareness to contexts of choice in vocation and life in which goals can only be determined personally. The counselor in his turn has secondary interest in those goals which are primary for the teacher, namely the goals of accuracy and discovery in relation to subjects. The counselor is interested in sharing only the expectation that the student will both be accurate and have discovered but he cannot deny these functions in educational context however much he personally favors the emergence and exploitation of personal initiative in students.

The application of this model of responsibility assigns to the counselor an interest in seeing that discovery teaching is part of the educational establishment in which he is employed. The model presumes, in addition, that the counselor will have a teaching interest in the paradigm of decision-making as it has application both to choice in vocational and other life goals and to learning about self during the course of experiencing and modifying the consequences of a personally-elected goal. For this reason our expectation is that explicit teaching in decision-making should be a part of the guidance program of an educational institution. Tiedeman intends to make the teaching of decision-making explicit in counseling as you will see from his description of the Information System for Vocational Decisions (Appendix B). This system represents Tiedeman's current effort to act upon the understanding of the model outlined here.

Finally, the appreciation of choice paradox in life evolves over a period of time. In this time, the explicit concepts of decision-making become more practiced, understood, and automatic. The critical tasks of the counselor towards these ends are to analyze the projections about choosing in which his students engage. The two conditions of choosing in which projection must be analyzed are those previously designated, namely choice-election, and goal-determination. In either case the counselor has interest in ministering to projections of either an internal or an external kind. The counselor attempts to mediate to the internal projections of guilt in ways such that his inquirer's attention to his own initiative and his practice of action under guidance of his initiative does not have anxiety and/or psychosomatic effects. The counselor attempts to mediate the external projections of shame so that blame becomes effectively assessed by an inquirer engaged in such projections. The counselor's goal is to bring about greater awareness of evaluations and process possibilities for the inquirer during the course of discussions of such projections.

We presume you note our tri-partite contribution to the theory of personal development through vocational development in this discussion. We believe that the mediation of occupational facts/data in an effort to turn them into occupational information for which an inquirer is personally responsible requires all three enumerated conditions: namely, 1) a structure of educational organization in which there is the expectation of personal discovery and the division of teaching and counseling responsibility in which this can go on without serious threat to the individual initiative and responsibility of the students; 2) an explicit teaching by counselors and/or teachers of decision-making, particularly educational and vocational decision-making, such explicit teaching being offered in compatibility with the discovery teaching in other subjects; and 3) an evaluating and/or monitoring system which is explicitly attune to the development of choice behavior in inquirers.

Prospects for Technology and Commerce in the Mediation of Vocational Development for Vocational Maturity

From Theory to Technology in Mediation. It is one thing to enunciate both a new goal and the structure of authority which will be required to attain that goal without serious threat either to individual liberty or to societal disintegration. These matters have been attended to in the prior two sections. It is still another thing, however, to say how vocational maturity can be cultivated within the required structure of authority. We do believe, however, that we have hit upon a good means to our end. That means will be the Information System for Vocational Decisions as it is described in detail in Appendix B.

Occupational Fact Mediation in the Environment of an Information System for Vocational Decisions. As you will note in Appendix B, the ISVD will be fashioned to mediate choice behavior. Several aspects of that system bear particular emphasis within the context of our immediate considerations here.

One aspect of ISVD in need of special attention is that our word "Information" denotes the placing of facts/data into the context of use. Thus the user or inquirer becomes an explicit part of our denotation of "system." We intend to place a student in potentially repeated interaction with a computer-centered environment programmed, not for prompt reinforcing of stimulus-response contiguity, but for an inquirer's personal inquiry.

A second noteworthy aspect of ISVD is that it will be constructed so as to facilitate an inquirer's learning how to harmonize his personal goals and their consequences in a real world by means of repeated inquiries in specific realms of social activity. Because the ISVD will put the inquirer in direct relation with his evolving history and intentions to the extent that such can be motivated and represented through the numbers, letters, and processing available in computer reckoning, it becomes possible to belie the fears of those who view such automation as a process for making decisions _for_, rather than _with_, people.

This brings us to the third and final particularly noteworthy aspect of ISVD. Our primary professional task, both in ISVD and even more generally in guidance, is the construction of a meta-system which permits analysis and response in terms of the majority of the variables of anticipated personal determination. For, in sum, the ISVD will represent a first-time physical simulation of the "outside" which a person must first learn to bring "inside" and then to act toward knowing that it is there but knowing also that he need not be "driven" by it, that he can place it in the service of his own personally-determined career development, in the service of his present and evolving maturity.

A Structure for Mediation of Vocational Maturation in the ISVD. Three specific parts of the ISVD will define its particular contribution to the needed process of mediation.

One of the specific mediational parts of the ISVD are the media themselves. The ISVD will attempt to take advantage of all the gains in mediation now available to us because of the media-work outlined in Appendix A. The output media designed into the ISVD will include films, film strips, slides, taped messages, and printed reports provided by means of both cathode ray tube and hardcore printer. Input media will include both the typewriter keyboard and the light pen operating in conjunction with the cathode ray tube.

A second mediational part of the ISVD will be its materials. The materials of ISVD will include the best of findings in vocational development and career linking as outlined in the second section of this paper and in Appendix A. Also included will be materials on opportunities, their characteristics and projected possibilities. Finally, materials will include a newly constructed curriculum designed specifically for the mediation of the developmental tasks of career decision-making and development.

A third mediational part of the ISVD will be the computer modulation of access and response in a time-shared mode. The modulation of the totality of formally construable career development through computer control brings timing and supervision into focus in the mediational process for vocational maturation.

Timing will be important in terms of 1) frequency of access, 2) sequence of item presentation and data processing and the monitoring of response to same, and 3) intervals between all three kinds of parts. Supervision has importance in terms of 1) the monitoring built into the inquirer-machine interaction itself, 2) the monitoring of the counselor in his supervision of the inquirer-computer interactional environment, and 3) the monitoring of the vocational educator as he engages persons in the tasks of role assimilation which follow upon the making of a vocational choice, however tentatively that choice is held, and the undertaking of vocational preparation.

The ISVD will be on the frontiers of all three realms of the mediational process designed for vocational maturation. However, as indicated in Appendix C, the ISVD will not be alone in any of its approaches to this condition. University and other non-profit organizations with personnel for technological development in education and profit-making organizations with similar staffs all now have at least one representative case participating in developing the parts of the mediation needed for vocational maturity. There is considerable mass now existing for creation of occupational fact mediation. In conclusion, let's look at the potential economy of such mediation as we also first swiftly review our argument in its totality.

An Economy for Mediation of Occupational Facts:

The Counselor and His Mediation of Vocational Maturation

Summary and Challenge. McLuhan and Fiore use their book, The Medium is the Massage, to convey awareness of a quoted statement attributed to A.N. Whitehead; namely, "The major advances in civilization are processes that all but wreck the societies in which they occur." We elect to summarize and conclude on this profound and somber a note.

We have attempted today to make us all aware that we are on the frontier of a new era in vocational guidance. This new era can combine the recent knowledge in vocational development and media which we have gained in order to mediate vocational maturation by massage of self development with the timing and logical processing available in wedding vocational development materials and media presentation under computer control of a great deal of that mediation. Our realization of this new possbility in our society would constitute a major professional advance on the order of the civilization advances to which Whitehead alludes. Maturation for self awareness in career constitutes a change in our civilization not now accepted in our educational and labor establishments. If we can conceptualize that advance, advocate it, demonstrate it, and sell it we will have massaged ourselves and our society so that we may all but wreck both.

However, we remind us in conclusion, that the mediation of this process of incorporation of change is the professional *forte* of us counselors. Therefore, we remain convinced that we all can both incorporate the change we have outlined into our own repertoires and personality and see that the new technology can mediate vocational maturation for all citizens without disaster in our society. It's worth a try. It's now within the realm of our possibilities.

A New Frontier and Its Needed Economy. Government and profit, as well as technologically grounded non-profit, organizations are now each carefully scrutinizing the technology associated with counseling and guidance (see Appendix C). Under such scrutiny, interest, and potential competition, our guidance technology is likely to experience marked change in the near future, probably within the next five years. Let's not be frightened of this potential for change. Let's get ourselves informed of it. Let's keep watch over its theory and thereby give direction to its evolution. We believe we all can do so if we remain interested in mediation for vocational maturation, not just in media for vocational development.

A prime question in the changes which are on our frontier have to do with the construction of an economy in which industry can profit. We do not mean to frighten you counselors, but we do suggest that we stay loose as this economy is reformed. There will be more than enough compensation for each of us. But what is needed?

Marvin Adelson, System Development Corporation, recently only half jokingly suggested to the Panel on Counseling and Selection, National Manpower Council on which he serves, that the government pay career development money directly to citizens on a regular basis in the future, not to counselors. Such an economy would put us counselors into competition for the governmentally-subsidized money of citizens who could then be accurately conceived as our customers and could thereby gradually but more definitely correct any of our misunderstood theories and practices. This economy would also permit the insertion of computer-assisted support systems for vocational decisions into the technology of which our improved service to users could be founded.

Preposterous? Possibly. However, we are on the brink of a revolution in our field. New solutions are bound to be needed. Let's not fight them; let's mediate them!

APPENDIX A

A Partial Inventory of Developments in Mediation in Which the Media Themselves are the Things

Robert Campbell who is responsible for studies in vocational guidance at The Center for Vocational and Technical Education, The Ohio State University was host to a 1966 invitational conference in which the system mediation of vocational development was the theme. Ann Martin, University of Pittsburgh, was co-instigator of the conference. Tiedeman chaired it (see Campbell, Tiedeman, and Martin, 1966). We invited participants who were known to be at work on the mediation of occupational facts/data.

The projects considered in that first conference have since been augmented by two others at a subsequent meeting of the Invitational Conference. However, the two additional projects still fit into the tri-partite framework in which Tiedeman was able to understand the work in media of those who originally met. Therefore, we use his original framework in reporting the research known to us which is currently underway in the mediation of vocational development. We merely fit the additional work into that original framework.

A. Research in Careers. One group of studies represented at the Invitational Conference consisted of studies a) of vocational choice, success, and satisfaction; and b) of instrumentation involved in the study and potential cultivation of vocational development. Included in this group at the Invitational Conference were:

1. Project TALENT. William Cooley and Paul Lohnes represented Project TALENT in this Conference. The reports now coming from the Project represent our best available pragmatic indications of the factor

structure of aptitude and interest measures and of the relation of those factors to career elections and career trees. The Project also offeres many working multivariate computational routines which will be needed in any on-line computer mediation of career research and/or development.

2. A Study of Intellectual Growth and Vocational Development. This project of the Educational Testing Service is under direction of Thomas Hilton with the assistance of William Godwin among others. The study will relate Hilton's paradigm of decision in vocational development to intellectual growth. The intention is to explore choice development within cognitive development.
3. Related studies not represented at Conference. Vocational maturation as a goal for the mediation of occupational information arises from the Career Pattern Study under direction of Donald Super, the Studies of Vocational Readiness Planning under direction of Warren Gribbons, and the Study of a Vocational Development index under direction of John Crites. The latter two of these continuing studies are funded by the Office of Education. The Super studies have been funded by various sources. Some of Super's studies are now being supported by a small grant from the College Entrance Examination Board. Each of these studies provides both theoretical foundation and empiric data for the mediation of vocational maturation with a computer-based interactive environment.

The CEEB has also underwritten some of the work of Robert O'Hara and Esther Matthews. The studies of both of these investigators have direct relevance to the foundation for career development which is involved in the mediation of occupational information.

A present large study of channels of access to post-secondary education is being done at the Center for the Study of Higher Education, University of California, Berkeley, under direction of Dale Tillery and with considerable financial support by CEEB. This study, School to College Opportunities for Post-secondary Education (SCOPE), will be a five-year longitudinal investigation of patterns of access to post-secondary education. The research is being conducted in four states and will offer solid foundation for conceiving the transitions from secondary to post-secondary education.

Kenneth Hoyt is also contributing to understanding of this transition from school to post-secondary education through his Vocational Specialty Testing Program. That Program is providing validity patterns in direct relation to many vocational specialties.

B. Occupational Information, Problem-Solving, Media, and Their Effects in Vocational Development. This second group of studies encompasses the largest group of interests among the participants of the Invitational Conference. These studies represent a rudimentary transition from the theory of vocational development to the problem of mediating occupational information so that vocational development can be further cultivated. Since each study is singularly defined by its own specific interests, no one of the studies in this group is now conceived as part of the systematic mediation of vocational maturation.

1. Occupational Information. One sub-set of this group of studies is specifically dedicated to the assembly and presentation of occupational information per se. One study in this sub-set is being conducted in New York under direction of Alan Robertson and George Dubato. This study provides a model for collecting occupational

information of direct relevance to a local labor market. It is also concerned with judgements about the importance of facts/data so that such information can be presented in a parsimonious and effective manner.

A precursor of the New York State Study is being conducted at San Diego under direction of Glen Pierson. This San Diego study is also involved with the collection and effective presentation of information of direct local impact. The study additionally relates itself to the problem of file maintenance and presentation. The San Diego information is presently on microfilm which can easily be recovered because each microfilm is attached to a coded and pre-punched Hollerith card.

2. Media. A second sub-set of these technological improvements in the mediation of vocational maturation has to do with media themselves. Two of the studies in this sub-set are under direction of Thomas Magoon, University of Maryland. One of Magoon's studies involves the construction and trial of single audio messages conveyed by message-repeater tapes. A second of the Magoon studies involves the expansion of this single-message technology into a multiple-message technology. Magoon now has a 23-track tape mechanism under trial.

A more general study of media is under direction of Ann Martin at University of Pittsburgh. The Martin study involves the construction and trial of occupational information using several media simultaneously. Slides, film-strips, and movies particularly interest Ann Martin at the moment. The Martin materials are being developed within a broad theory concerning the harmonization of work, education, and self and with the needs of non-college youth in specific focus.

Keith Whitmore has been an interested participant in the Invitational Conference. Whitmore, an employee of the Kodak Company, is listening to our Conference conversations in order to guide the resources of the Kodak Company into possible entry into counseling and guidance support systems.

3. Problem-Solving and Vocational Orientation. John Krumboltz is engaged in what is likely to become a widening series of investigations of problem-solving experiences which stimulate career exploration and interest. Krumboltz has already constructed and tried kits which highlight the central problem-solving functions from each of several occupations. This work expands his work in decision-making in which he collaborated with H.B. Gelatt, Murray Tondow, Barbara Varenhorst, and William Yabroff at the Palo Alto Unified School District.

   Magoon is also working to specify an effective problem-solving model for educational-vocational planning. Magoon seeks a written form of presentation which can be used with several subjects at once. He is presently particularly focussed upon the transition from school to college

   Although they have not been present in our Conferences, several of us Conferees are extremely interested in the game context for career mediation with which James Coleman and Sarane Boocock are experimenting.

4. Curricula for Career Competences. Several projects in curriculum development are worthy of specific mention. H.B. Gelatt, Murray Tondow, Barbara Varenhorst, and William Yabroff in cooperation with John Krumboltz at Stanford have led the way in the teaching of decision-making. Their applications have been at the junior high and high

school levels in the Palo Alto Unified School District. These applications have also found union with computer assistance in educational planning as we note below.

A related but different line of effort is that in the Philadelphia and Chicago School Systems. Helen Faust in Philadelphia and Blanche Paulson in Chicago are working with persons in vocational education to develop materials for career,not occupational counseling. Martin Katz, Educational Testing Service, consults with the Philadelphia project. Katz has suggested several skill units which are important for the development of career competence.

Finally, the National Vocational Guidance Association last year sponsored a Conference (1966) of career researchers, curriculum specialists, and vocational educators which made effort to deal with the teaching of career competence in the regular and vocational curricula.

C. Systems Under Development for the Mediation of Vocational Maturation. Two central issues in the mediation of occupational facts/data for the goal of vocational maturation are a) the media through which facts/data are modulated and b) the offering to the inquirer of personal responsibility for goal delineation. When these two necessary conditions are present, a third and possibly final necessary condition becomes relevant, namely the timing and supervision of the mediation and the responsibility. The questions of timing and supervision in the modern technology of education brings the role of the computer into central focus. The computer can be an instrument of access and presentation under general direction of the programmer and a counselor and the specific direction of the individual inquirer. There are several system approaches to this timing and supervision for occupational facts/data mediation which are represented in the Invitational Conference. They are:

1. Clear Language Print-out of Demographic and Psychometric Data. Thomas Magoon has a project of this name. His efforts will provide a program for an IBM 360-type system which will provide ordinary data for counselors at consoles remote to the 360 computer but present in the counselor's office.

   William Godwin also told the Conference that a still more advanced machine "language" for test interpretation is available at Educational Testing Service under name of PROTRAN. PROTRAN makes it possible to have a clear language print-out of psychometric data which can be given directly to the inquirer, not the counselor.

2. A Pilot Computer Assisted Vocational Guidance Program. Joseph Impelleteri, The Pennsylvania State University, has an operating on-line, computer-assisted vocational guidance program. At the present time, the Impelleteri system is limited to slide presentation and description of occupations. However, the system can be expanded if, and when, film loops, and possibly even movies, can be transmitted via the cables involved in on-line computer assistance of data management and presentation.

3. Information Processing Procedures and Computer-Based Technology in Vocational Counseling. The System Development Corporation, Santa Monica is a pioneer in devising computer-assisted support systems in education. The Autocounselor, the device of Donald Estavan and John Cogswell, has already demonstrated the high potential of on-line computer assistance in educational planning. H.B. Gelatt, John Loughary, and Murrary Tondow assisted in the preparation and test of that system in the Palo Alto Unified School District. At the

present time, Cogswell and Estavan are assisted by Barbara Rosenquist in the study of vocational guidance in vocational education. These new vocational guidance studies will lead to the fashioning of guidance support activities for counselors. They can also lead, in potential, to the fashioning of counselor-like interviews of students in relation to the planning problems inherent in vocational education.

4. Counseling and Support System. The International Business Machines Corporation and the Science Research Associates are presently involved in designing and testing a counseling and guidance support system for use on the IBM System 1500 which may soon be fairly widely available. (This System 1500 is the one particularly noted in a recent Life magazine article on the work of Patrick Suppes and Richard Atkinson at Standford University.) The System 1500 is ideally adapted to computer assistance in programmed instruction. The IBM-SRA Counseling and Guidance Support System will probably have many of the elements of computer-assisted instruction as these elements are adaptable to educational and vocational orientation. Their Support System will probably also encompass the numerical and logical processing of data required for the work of the counselor in educational and vocational orientation. Such processing will be limited by the fact of the medium size of the computational and memory units of the processing functions which can be made directly available to the inquirer himself. In addition, the System 1500 will have program, if not direct transmission compatibility, with the larger IBM System 360. Therefore, these plans of the IBM-SRA have considerable implication for us. The System is being developed by Frank Minor of IBM, and Burton Faldett and John Lombard, SRA. Donald Super and Roger Myers are primary consultants, Tiedeman a secondary

consultant.

5. Project PLAN. John Flanagan has recently organized Project PLAN within the American Institutes for Research and with the financial support of the Westinghouse Educational Foundation. This project will prepare units for the facilitation of vocational choice and development. The project will also make use of the Project TALENT computer routines to put William Cooley's theory of a measurement system for guidance service at on-line, computer disposal of the counselor.
6. An Information System for Vocational Decisions. As noted above, we will soon have a new operating IBM-SRA potential at our command. The IBM-SRA system will also have compatibility with a larger and later system which Tiedeman and several colleagues are in the process of designing, assembling, and constructing. The Information System for Vocational Decisions is described in detail in Appendix B.

APPENDIX B

A Computer-Based Information System for Career Decisions[1]

In Prospect for Computer Technology

Professor Ellis invited me to address the matter of prospects for the computer in educational research. I was happy to do so as one of his colleagues[2] in the Harvard-NEEDS-Newton Information System for Vocational Decisions. He and I both hope that our System will materially augment prospect for computer technology in guidance and career development.

The Information System for Vocational Decisions (herafter ISVD) intends to place an inquirer in potentially repeated interaction with a computer-centered environment programmed for his inquiry, not just for prompt reinforcing of stimulus-response contiguity. The context for the inquiries will be education, occupation, military service, and family living. The inquirer may elect at will among contexts. The System will be constructed so as to expect the inquirer to learn how to harmonize his goals and their consequences by means of repeated inquiries in these four important realms of personal activity.

I stress at the outset that the primary goal of the ISVD will be inquiry, not reinforcement. Because our System will intend to put the inquirer in direct relation with his evolving history and intentions to the extent that such can be motivated and represented through the numbers, letters, and processing available in computer reckoning, it becomes possible to avoid one of the fears which the public has of using computers in guidance, namely the fear that computers will determine lives by making decisions for, not with, persons. Our System will let any inquirer experience practically the same joy and frustration which you computer devotees daily do, namely the realization that the answer is in you, not the machine. Despite our occasional regret upon such realizations, we know that we still persevere. Therefore, the assumption of the ISVD will be that any person can and will persevere through inquiry. A further assumption of the ISVD is that repeatedly experienced failure to find full solutions to questions can be fashioned into mature capacity to proceed on inadequate bases in adult life as an inquirer is brought to realize the care we used in fashioning a System which can take him down the path of, but never completely into, awareness of the operation of his motivational system.

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[1] Speech delivered by David V. Tiedeman in symposium: "Some Prospects for the Computer in Educational Research," AEDS-AERA session on Educational Research, Detroit, Michigan, 3 May 1967. The central portion of this paper has been previously reported as Project Report No. 2.

[2] Other Principal Investigators of the Information System for Vocational Decisions are Russel Davis, Richard Durstine, Wallace Fletcher, Edward Landy, Robert O'Hara, and Michael Wilson.

I trust that you understand from my remarks that I plan assembly of a System different from that now imagined in computer-aided instruction or in educational data processing. The Information System will subsume those conceptions as intermediate in the condition of education for responsible career decisions. However, our primary professional task will be construction of a meta-system which permits analysis and response direction in terms of the majority of the variables of this expected responsibility.

How do we intend to do this ? That is what I direct the remainder of my remarks toward.

The Career and Choices in Career Development

The context of vocational decision-making offers excellent opportunity for realization of our intention when the computer is given centrality, but necessary incompleteness, in the interacting system in which career development emerges. I define career as personally-given direction in developing vocational activity. I bind a career with expectation that the exercise of personal intention brings with it accountability for self-directed activity. Therefore, I expect that career development requires emergence of self-initiated activity for which a person permits himself to be held to account. When persons do so, we have opportunity to give power to the process of social control by encouraging the independence of freedom and the interdependence of social consciousness.

The forming of career involves a set of decisions which are made throughout life. These decisions are made in the context of education, vocation, military service, and family. The object, plan, and progress of decisions in each of these areas have their own characteristics which I shall comment upon in the next section. The socially-determined choice contexts in which progress in career takes place are as follows:

A. Education. There are six primary choice contexts in which educational histories are forged. Each of these contexts also has a subsidiary context which I shall also note. The primary contexts with their subsidiary contexts are:

1. Choice of secondary school curriculum. The subsidiary choices relate to the kind and level of curriculum and to the specification of skill area within each kind and level.
2. Choice of post-secondary education. Subsidiary choices in a post-secondary education election include the kind and level of opportunity. As final choice of post-secondary education nears, a specific school and/or college must be differentiated from a more

general context. This specific differentiation involves choice as a part of a post-secondary education placement function.

3. Choice of a collegiate major. This choice of college major involves choices of kinds of majors and a differentiation of potential emphasis in terms of analysis, synthesis, and/or reduction to practice in each of the kinds of areas.
4. Choice of a graduate school. This graduate school choice is similar to the choice of a college so I will not repeat further.
5. Choice of graduate specialization. Specialization in graduate school continues the specification of prior college majors in the several areas of knowledge. However, at this time the emphases on analysis, synthesis, and reduction to practice must become clear cut and must be pursued avidly. At the master's level there is likely to be an emphasis on the technology of a subject; at the doctor's level an emphasis on professional activity.
6. Choices related to the further refining of occupational location by both job and position emphases within general vocational activity. These job and position choices find interrelation with endeavors organized as continuing education.

B. Vocation. There are three primary choice contexts associated with vocational development itself. Each primary context also has its subsidiary contexts. The primary and subsidiary contexts are:

1. Entry Job. This choice involves a first choice of kind and level of occupation. As entry into work nears, the choice must be sufficiently differentiated so that work is initiated in a specific job. This differentiation involves occupational choice with the placement function.

2. Job Progress. Choices bringing about job progress initiate emergence of a career. If a person attempts to conceive his job movement in a personal historical context in which he conceives his own vocational activity as progression, he initiates career considerations into his vocational development.
3. Position and career choices. As a person develops a sense of progress in his occupational activity, he begins to focus upon jobs, not occupations; then upon positions, not jobs; and finally upon career, not work. These kinds of choices become salient around midlife if they become salient at all.

C. Military Service. There are three primary kinds of choices associated with the military service aspect of vocational behavior. These primary contexts are:

1. Kind of service. The person must differentiate between army, navy, marines, coast guard, and air force.
2. Level of service. A prime issue at the beginning of military service is the distinction between enlisted and officer status. Some persons start right off to prepare for officer status. However, in either status, promotion also becomes an issue in its proper time as determined by the regulations of a service.
3. Specialization. Within enlisted ranks in particular, choice of specialization becomes important. In the officer's ranks, specialization is likely to be present but not stressed to that degree in which it is stressed in enlisted ranks.

D. Family. There are two primary contexts for choice in the family area. They are:

1. Marriage. There must be a decision about marriage or not. If

marriage is elected, a further decision relates to *when* in life it should occur and/or re-occur. As noted, the marriage context also involves a choice about *continuation in marriage* with divorce being the legal means for separation, termination, and potential reinvolvement.

2. *Family*. Style of life in family is also an area in which choice takes place. This area involves choices of *size of family*, *location of household*, *culture* with regard to extended family living, and amount of *balance of time* among work, family, and recreation.

The System

General Framework

The Information System for Vocational Decisions is deliberately named despite the fact that our connotations for its words are not presently entirely a matter of common parlance. Our word "Information" is intended to connote the placing of facts/data *into* the context of use. This use of the word emphasizes our belief that facts/data require the context of use if they are to be conceived as information.

Students and workers are to be permitted to turn educational and occupational facts/data into information through the System. Thus the user becomes an *explicit part* of our connotation of "System." Our connotation reflects our intention to offer the user complete responsibility in choice of educational and vocational goals. Although it is probably inevitable that the computer will be blamed for "error," we do not intend to let the users of the ISVD enjoy the luxury of that impression without contest.

Data Files

The ISVD will have a data file for each of the previously noted four areas of living: occupation, education, military service, and family. Data in each file are to range from general to specific. In addition, data will attempt both schematically to represent the present and to outline the future for a decade or so, such outlining to be in small time increments. These specifications obligate the System both to deal with local job markets and to incorporate data on local job vacancies which will be helpful in placement suggestions.

The fifth data file in the System will contain inquirer characteristics. This file will be in two parts. One part will deal with characteristics of inquirers in general and will report on relationships of these characteristics with later choices and successes of those inquirers. This file will be used both to suggest alternatives to users who need wider scope for consideration and to subject aspiration to the test of "reality" when the user is in a condition of clarification of a preferred alternative. The other part of the inquirer characteristic data file will be the private educational and occupational history of the user as portrayed in his context of developing justification for his preferences and their pursuit and consequences.

Decision-making: The Paradigm for Choosing

Reflection upon facts/data of the several areas will be encouraged with the expectation that the facts/data will be put to personal use. The personal use to which these facts/data are put will additionally be expected to become guided by a paradigm of vocational decision-making which I have fashioned with Robert O'Hara. The paradigm essentially conceives decision in relation 1) to the passage of time, and 2) to the undertaking of the risk and activity required to achieve what one elects to achieve. This conception permits division of the time interval into a period of anticipation and a period of accommodation. Anticipation occurs before the activities of a discontinuity become required; accommodation occurs after activity is required. Stages of exploration, crystallization, choice, and clarification are distinguished within the period of anticipation. Stages of induction, reformation, and integration becom possible within the period of accommodation. Distinctions among these stages will have to be a central part of a MONITOR computer routine in the ISVD.

Computer Routines[1]

Computer routines and supporting materials will be fashioned to conform with expectation that this vocational decision paradigm both exists and can become explicit and useful to someone who practices its use. The paradigm will determine the computer routines which we will develop to permit access to each of the data files and to provide data upon request. There will be three primary computer routines: REVIEW, *EXPLORATION, and CLARIFICATION.*

The REVIEW computer routine will permit call up and comparison of a prior statement about a then future event both after that expected future event has occurred and after the user has provided indication of how his prior expectations were fulfilled before he sees his prior statement of those expectations. The procedure will expect a person to experience insight with regard to consistency, and inconsistency available during comparison, and to learn from such insight that his own intuition guides his activity. The intended outcome of REVIEW is that the user learn from his history.

The EXPLORATION computer routine will allow the person to rove through a data file as near randomly as possible. The routine will encourage use of randomness largely at only general levels of material in order to conserve time but will not forbid specific exploration if, and when, desired. Furthermore, routines will be developed to suggest alternatives on the basis of comparison of personal characteristics with established associations between such characteristics of others and their preferred alternatives. The intended outcome from this routine is 1) emergence of a set of alternatives, and 2) the bases on which the alternatives are preferred. I emphasize this latter point in effort to increase your awareness of the reasoning process that is actually involved in career development.

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[1] The basis for this plan is due to Allan B. Ellis.

The CLARIFICATION computer routine will be available after specific alternatives are selected. CLARIFICATION will take the user into queries about the depth of his knowledge concerning the then favored alternatives and the understanding of future alternatives which are likely linked with present preferences. The outcome desired from CLARIFICATION will be the dispelling both of some doubt and of some ignorance concerning the next step in the progress of career which the person is evolving. Lessening of both doubt and ignorance is likely to increase the user's confidence in meeting the required activities of his next step.

In addition to the three primary computer routines, MONITOR will be available as the only secondary computer routine. MONITOR will essentially consist of the evaluations which we are able to concoct to determine existence of mastery of stages in the paradigm of vocational decision-making. For this reason, MONITOR must be able to play back into, as well as over, the computer inputs which the person generates. There will be three essential aspects of MONITOR. The first aspect will be the actual procedure which we concoct and program the computer to provide. The second aspect will be the bases on which we have caused our judgements to operate among the data put in by the person during his interaction with the computer. The third aspect will be the basic computer routines themselves which the person will be taught to use *if and when he desires to have them.* This aspect will make it possible for the user to write his own monitoring bases to some extent and to have these monitoring procedures play among his material just as ours did originally. We hope through MONITOR to encourage mastery of the concept of feedback and to give practice and supervision in its application.

Material

The computer routines will incorporate the vocational decision-making paradigm. We do not expect that the computer will itself be sufficient to mature fully the capacity and confidence for use of the decision-making paradigm. We will therefore design two other activities into the System in its totality. One of these other activities will be the simulation of decision-making. Simulation will be available in 1) games, 2) booklets in which the concepts are taught, and 3) decision problems of a vocational nature which must be solved in interaction with the computer.

The second of our other activities which we hope will further mature the use of the paradigm of vocational decision-making will be the actual provision of responsibility for work under laboratory and practice conditions. In laboratory and practice, reality can replace imagination if there is intentful supervision of our users as they practice. This supervision will probably be of the same nature as that employed by counselors with our users as they are engaged in the simulated activities of vocational decision-making during the user-computer interactions.

Career: The Maturation of Personal Responsibility Through Vocational Development

I have so far attempted to show that the Information System for Vocational Decisions will expect choice and will cultivate the capacity for, and confidence in, choosing by giving users almost infinite possibility for the exercise of decision-making among data files while simultaneously attempting to make the processes of decision-making both explicit and mastered. These are elements in vocational development which have previously neither been unified in this manner nor made available for practice in modes in which complexity is possible but time is not of the essence, at least not the time of persons other than the person engaged in the exercise. The existence of the ISVD will therefore be a first-time physical representation of the "outside" which the person must first learn to bring "inside" and then to act toward knowing that it is there but knowing that he need not be "driven" by it if he is the master of it.

In its totality the ISVD will represent "reality" in its data files, offer processes for working with facts/data through its primary computer routines, and provide practice for integration of a differentiated condition. The System will provide practice under supervision through 1) its secondary computer routine, 2) its simulation of decision-making, and 3) its personal supervision a) by a counselor of the person in interaction in the computer routine and b) by a vocational educator as the student user assumes real work responsibility in laboratory and practice work situations.

The System's Status and Prospect in Computer Technology

The ISVD has formally existed only since 1 June 1966. Since that time we have 1) assembled necessary personnel, 2) worked out our location in a complex University, and in collaborations with the Newton, Massachusetts School Department, and the New England Education Data Systems, 3) delineated our need for computational equipment, and 4) started the construction of computer routines and materials. We have also necessarily worked through a plan for our next twelve months, all within the first nine months of our own existence.

The ISVD is supposed to be a working prototype by 1 July 1969. During our thirty-seven month project, we intend to bring the System through two generations of a prototype. The intention is to have practically complete and reasonably accurate specifications of an operating computer system for vocational decisions at the conclusion of the project. We will also have a working second generation prototype, of course.

The signs are good that we can make significant progress in assembling, testing, and further developing our promised prototype. The Radio Corporation of America will figure prominently in our developments. Ellis and I, along with our colleagues, hope that in another two years we may have thereby succeeded in materially increasing the prospects for computer technology in guidance and counseling activities of career development throughout life.

APPENDIX C

Prospects in Mediation:

Commerce in Mediation

As particularly noted in Appendix A, the Office of Education has created a now critical mass of research and development in the mediation of occupational information which causes counselors and vocational educators each to be at a new frontier of their professions. Computer-assistance in the mediation of occupational information may well lose the figurative race between the horse and the steam engine to which John Krumboltz likes to refer. However, we admonish you, as Krumboltz so frequently does, to remember that the race was *eventually* won by the steam engine. We firmly believe that computer assistance in the mediation of occupational information for vocational maturation will be available and accepted within five years or so. So let's prepare for it. However, let's also be aware of organizations besides the Office of Education which are creating this evolutionary force in the technology of vocational guidance.

Non-profit Organizations. We are only partially aware of research and development centers around the United States which are engaged in the assembly and provision of computer-assisted support systems for vocational decision-making. However, we do know of several organizations of such nature.

The System Development Corporation, Santa Monica, engages in the development of support systems in education. Furthermore, as noted in Appendix A, Cogswell, Estavan, and Rosenquist are presently engaged at that Corporation in enlarging the context of support for vocational guidance.

Actually, the support routines which Cooley and Lohnes have evolved for analyzing the data of Project TALENT also constitute a resource for research in vocational guidance. Some of those support routines will probably be put into the Information System for Vocational Decisions for selective use by inquirers. (It just seems to us that others should be able to learn as much about their careers as Cooley and Lohnes did about theirs as they engaged in the analysis of the career data of Project TALENT.)

The New England Education Data Systems is a membership organization of some 64 school systems in New England. These organizations pay an annual fee on a per pupil basis. The fee entitles members to the services of the NEEDS. These NEEDS service systems presently provide computer assistance for pupil accounting and class scheduling. The development of the ISVD in cooperation with the NEEDS will potentially expand the repertoire of assistance available through that organization. The NEEDS is also simultaneosly involved in research intended to expand on-line computer assistance for both instruction and educational administration.

The Educational Testing Service and the College Entrance Examination Board are considering further expansion of operation into the computer mediation of testing and reporting systems. Also, the Measurement Research Center and its subsidiary Systems already have well developed and operating pupil testing, accounting, and reporting routines.

Universities such as California (Santa Barbara), Florida State, Harvard, Maryland, Pennsylvania State, and Stanford are also already developing guidance and counseling support systems.

Profit Organizations. Those of us in guidance seem to be relatively unaware of the entry into our field of profit-making organizations other than those which have made their money on tests and occupational materials. Book, media, and computer companies are looking carefully at developments in counseling and guidance support systems. Let us in our turn, take a look at them.

IBM-SRA is likely to be the first organization to market a counseling and guidance support system. We have mentioned this system in Appendix A. We merely remind us here that a large corporation is interested in our fortunes if we provide a way for them to cultivate that interest for their profit.

Westinghouse has also just entered into an agreement with the American Institutes for Research. This agreement calls for the creation of school relations with AIR which are potentially akin to those we have described for NEEDS. However, at the present time the relationships merely call for free consultation and collaboration in the development and test of the Westinghouse-AIR Project PLAN. The System is presently planned primarily as an on-line, computer-assisted, support system for just the counselor, not for student inquirers. However, there will eventually be computer-assisted units on vocational development which are prepared for student use.

The General Electric and Time and Life amalgam which gave rise to the General Learning Corporation is also a potential resource for construction of computer-assisted systems in support of counseling and guidance. At the present time, GLC's available General Electric time-shared computer is one of the few operating realities of its kind even though its applications are only of a business variety.

The Radio Corporation of America supports research and development in computer assistance in education both at Stanford University and the New England Education Data Systems. This support on the part of RCA will probably permit the ISVD project to secure computer access which is reasonably advantageous to our grantor, the Office of Education.

This list is not exhaustive. Other computing companies are watching developments in this field and will move in with us as our technologies become financially profitable. Companies which provide the hardware and software for media are helping and watching in these developments. Sanders Associates is a good example in the hardware line; Follett Publishing Company which recently incorporated the interests of John Loughary, Harold W. Phend, and Murray Tondow, are good examples in the software line. Large publishing houses which have not had to consolidate with other industries to keep their competitive advantage are also interested and willing to help. McGraw-Hill Book Company and its educational division is a prime example of this kind. Guidance Associates are already well developed in occupational mediation.

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Sociological Aspects of Career Development

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INTRODUCTORY REMARKS

For the past five years my primary interest has been in occupational sociology and in the sociology of organizations. In many ways they are almost the same in that most work in America occurs within a bureaucratic setting. The research that I have done focuses mainly on the technical-scientific careers for two reasons: (1) these are increasingly strategic occupations and (2) there is large-scale financial support available for study of these occupations. The National Science Foundation and the National Opinion Research Center are particularly interested in supporting such studies.

One set of data we have concerns 50,000 male workers in 40 different occupations on whom we have collected data on social and cultural origins, career patterns, prevalent work settings, and educational training. We are interested in the social and personal factors that enter into the occupational distribution of people.

A second broad set of data concerns a sample of 20,000 graduate students in scientific and engineering fields. We were especially interested in data on their financial circumstances (in relation to government concern of financial support of higher education). We were able to determine fields that were saturated with support and those that were not. This was then information used by agencies in developing their guidelines for support of higher education. I am presently working with the data of the 50,000 workers, categorized into ten year groups according to age from 25 to 64, to see if we can develop age-linking factors in career development.

Occupational Values. We collected data on occupational values, relating these to how a person enters into the process of choosing an occupation--matching occupational values and occupational choice. From Rosenberg's work we determined a number of questionnaire items which were predictive. The opportunity to be creative, to make money, and to be of service to humanity emerged as three values that differentiate people into a number of broad career fields. We find that service orientation increases through time, while opportunity to be creative and original declines slightly with age. There is evidence that the creative work in most fields is done in the early years. We then need to ask, is this due to a lessening of motivation through time, or because of generational differences? Because we are cutting across ages (rather than studying longitudinally) do we have people who because of circumstances 40 years ago never had the opportunity to develop creative motivation? Or is it due to socialization, changes in self-structure through the years, or what?

We were also interested in work roles and found the proportion of people engaged in teaching increases with time, and the proportion engaged in basic research goes down. There is a curvilinear relationship with age and being engaged applied research. Research role seems to peak at about age 45. (It should be remembered that this study deals with male workers only---35,000 male workers ages 25-64 in strategic occupations).

Another effort I am engaged in has to do with the "Brain Drain". In the sample of 50,000 workers, 1,800 of them received some of their training in foreign countries. We have some people who leave the U.S. to go to other countries and vice-versa; but the feeling is that the "drain" is one-sided--more highly trained workers come to the U.S. than leave. So we were concerned with social origin, patterns of achievement, type of education, and utilization of workers trained in other parts of the world. The West European countries are the greatest suppliers, along with Canada and mainland China. From the social science point of view, one of the interesting questions regards the degree to which education and training transcends national boundaries--the idea of an international intellectual community. To what extent do people from other countries, with similar educational training and in similar occupations have similar occupational values? If there is this community of occupational values, then country of origin is not a relevant variable. If there are country and regional effects then one could still argue that there are cultural differences which have lasting effects.

At the National Opinion Research Center I did a study of 40,000 graduating seniors in 1961, who have been contacted periodically since that time. Two thousand of these seniors reported that they were interested in law as a profession, from which emerged the papers on lawyers.

Social Origins. So these are the kinds of research that I have been doing. I am especially interested in or concerned with structural variables as they are linked to the larger studies of social stratification. I start with the hypothesis that all societies are stratified. Usually we rely on education, occupation, and income for locating a person in the stratification. Some societies are stratified by religion; in our society race is a critical variable. If we say that people are distributed by privilege, power, and rank, presumably the life position that the person enters into at birth is going to effect his life course and career development. If we want to study the process of occupational choice of the individual, we must have some notion of the personal and structural constraints within which that person must operate.

To get some feeling for how a work-structural constraint in American society operates, some current and comprehensive research in the study of occupational mobility is important. I stress again that career development is bounded by the larger social, structural settings. In brief, the sons of unskilled workers can be transformed but there is some form of probability which can be attached to that.

The highly motiated upward mobile person has been important to our society. Hollingshead has pointed to the data relationship between social class status and any number of variables, but it is hard to generalize from Elmstown to the broader culture. So that is why I am concerned with large numbers, because it is important that our data is based on a large national sample.

Blau and Duncan were interested in the relationship between father's occupation (as one indicator of social status) and occupation of son. From census information they were able to collect data on 20,000 men in various occupations in 1962. Data were collected on three variables, (1) father's occupation, (2) first full-time occupation of son, (3) occupation in 1962. What they found was that there is much occupational mobility in the U.S., especially upward. But occupational origin (father's occupation) does influence the eventual occupation of the son. Using a D.O.T. type classification, Blau found there was more upward than downward mobility among this population of male workers (linking variables 1 and 3). So this is still an open society in which there is opportunity for mobility. Upward, exceeded downward by a ratio of 3 to 1. On the relationship between variables 1 and 2, father's occupation and first occupation of the son, no differences were noted, since often the initial job involves an actual drop in level from the father. So a boy from a lower-middle-class family may have to start as a ditch-digger to begin to finance his medical education. While the first job may involve a drop in status, the eventual status is higher.

Mobility upward tends to be to adjacent groups: the son of a semi-skilled worker will become a skilled worker, the son of a clerk will enter a profession such as teaching. This movement to adjacent occupational strata is confirmed by the occupational trends and evolving patterns of occupational structure, e.g. relative figures of increasing numbers of persons in service occupations or professional occupational groups. Furthermore, the trend is toward salaried occupation as opposed to self-employed or individual enterprise types of occupations.

According to the delineation of class boundaries, you find three broad categories: middle class as non-manual, working class as manual, and the agricultural class. The data confirm this threefold conception of class structure in American society. Here again there is no downward movement that is not compensated for by upward movement, and movement is to adjacent categories, e.g. the son of a farmer will move to a blue collar occupation. In general there is no radical transformation.

Religion. The concept of religion in occupational sociology is of growing importance. (The work Max Weber is important here.) The postulation is that the Protestant Ethic has created an environment in which the occupational world must function, and that something about religious experiences of the person will be related to occupational choice. The Protestant Ethic has its emphasis on self (responsibility) and on achievement. There is a greater emphasis on educational attainment for Protestants than for Catholics also.

What data is there to support the contention of a relationship between religion and intellectual or educational attainment? One of the findings coming out of the National Opinion Research Center career choice studies dealt with the Catholic-Protestant differential--does the classical difference hold up? Greely, in Religion and Career, asked whether the religious experience of Catholics and Protestants leads to different career lines. He found no differential--just as many Catholics as Protestants were in various fields and just as many of one group as the other were interested in continuing in graduate education. In this case the null-hypothesis was confirmed.

Greely and Warkov collaborated on a study based on the notion that parochial school background had a relation to subsequent occupational choice, and educational attainment. We had information on age, education, and parochial school background. We found that for the age group 25 to 64, there were enormous private - parochial school differences in educational attainment, private school students going much further. But among the 20-24 age sample there was no difference. So time will tell whether these differences will persist. In essence, with regard to career choice and religion, we believe that it does influence choice but in ways that are yet not clear. The problem with studying religion in America is that there are so many other variables that are intertwined. Cultural background, opportunity to acculturate, and ethnicity enter in.

In considering immigrant groups, what differences are accounted for by cultural factors and what by religion? Some preliminary evidence suggests that for Catholics of different cultural backgrounds (i.e. country of origin) there are enormous differences in life style and in religious commitment. There are cultural values, attitudes toward work, attitudes toward time, attitudes toward the environment, types of discipline, and the kinds of organizational life, some of which depend on ethnic and cultural factors and which then get combined with religious backgound and then have something to do with occupational choice. Strodbeck in comparing Protestant, Jewish, Irish/Catholic and Italian youth in New Haven (controlling for social class) has come up with systematic differences in profiles in relation to education and life styles.

Now in relation to the following remarks on the legal profession, we generalize that in studying an occupational group, it is not enough to study only the structural variables, but we also have to look at the intellectual component, and a variety of social-psychological aspects.

In most occupations the three most important variables were found to be sex, academic performance, and occupational values. Only after these three do social class and religion enter in. But in Law, the two variables happen to be of much greater significance-social class and religion.

SOCIOLOGICAL ASPECTS OF CAREER DEVELOPMENT: NOTES ON THE LEGAL PROFESSION

Our understanding of recruitment processes affecting the legal profession has been enhanced by the results emerging out of a recent longitudinal survey of some 40,000 graduating seniors taking their bachelor's degree in a sample of 130 American colleges of arts and science in spring 1963. Information was gathered by means of self-administered questionnaires distributed by the National Opinion Research Center at the University of Chicago for the purpose of securing data on social origins, career plans, educational preferences and the like. A total of 1797 male graduating seniors whose retrospective freshman career choices could be ascertained reported a long-run career preference for the field of Law at the time they returned their questionnaires in 1961. One year later, 1,179 men in this group (66 per cent) were attending 124 of the 151 available accredited and unaccredited law schools offering professional preparation in the United States.

This paper considers (1) the social correlates of a career choice of Law among this sample of students; and (2) some institutional variables influencing the flow of manpower into the field of Law.

Prospective Lawyers and the American Social Structure. What are the social origins of college graduates aspiring to a career in Law? Are there structural constraints facilitating the movement of some students into this career field? The data unequivically show that legal careers, more so than careers in other fields, are molded by the stratificational system of American society. The segment of the college graduating population from which law schools recruited their students differs markedly from the remainder of the student population in terms of social background. Furthermore, students entering college and maintaining their commitment to this career field were even more sharply differentiated from the remainder of the graduating class on the basis of social status.

Social Status is determined by the possession or absence of those attributes most highly valued by the members of a society. Since the determinants of status in American society are income, education and employment in certain occupational categories, sociologists utilize a number of indices to guage the relative standing of the individual in the social system. Whether it be the occupation of the head of the household in which the college student was reared, family income or parental level of educational attainment, students who always preferred Law throughout their undergraduate career ranked higher than those choosing Law at a later point in time; and both types of students ranked above those students never considering a career in Law during their college years. In sum, prospective lawyers tend to be recruited disproportionately from one segment of the population, and this segment is one endowed with the prerequisites of relatively high social rank.

Occupations differ in the composition of their members in a number of respects in addition to social status. Consider the religious origins of prospective lawyers; some 60 per cent of the male students at large were reared as Protestants, but only 41 per cent of the early aspirants to Law and some 47 per cent of those choosing Law at a later date were reared in America's majority religion. Catholics comprised one quarter of the student group never considering law, but they constituted fully one third of the graduating seniors preferring this field. Jews were similar to Catholics in their propensity for a career in Law as entering freshmen (they comprised fully 20 per cent of the group planning on this career field, but only 8 per cent of the male students as a whole destined for other fields). Further, Jews also showed a tendency for switching into Law from other fields by the time the four years of undergraduatre work were completed. Thus, the body of young men aiming for a legal field of work was overrepresented by members of minority religions.

To be sure, there are other aspects of career choice in the field of Law. Let us briefly consider academic performance and occupational values. Suffice to note that prospective lawyers are heavily overrepresented among the top fifth of the entire graduating class on academic performance (measured by an index that adjusts the four-year cumulative grade point average by the institutional quality of the college attended). Furthermore, future lawyers differ from their graduating college classmates on the basis of the occupational values they deem to be important.

A growing body of research shows that interests and values influence occupational preferences; indeed, occupational values and occupational career choices tend to become aligned through time to achieve consistency. How, then, do prospective lawyers compare with other male graduating students? In the aggregate, significantly more law aspirants attribute importance to the following occupational values: making lots of money; a chance to help others; freedom from supervision; and an opportunity to work with people. In contrast with students aiming for careers in other fields, proportionately fewer law aspirants emphasize originality or creativity, avoidence of a high pressure job or the need for a job affording steady progress. While these are differences in the aggregate, distinctive value profiles undoubtedly would rise to the surface if aspiring lawyers were classified on the basis of social origins and anticipated career lines.

In the remainder of this paper, we consider other instutitional variables that affect the deployment of future lawyers.

Allocation of Law Schools. Professions vary in the amount of formal preparation demanded of the neophyte practitioner. The graduate of American colleges of arts and science may assume the title of "engineer" or "teacher" upon receipt of the baccalaureate. The physician or lawyer, however, is required to undertake additional years of professional preparation before the occupation title is legitimately his to employ.

To understand the career sequence involving professions in the latter category entails a double focus: on the one hand, we would want to know what it takes to enter the elite professional schools: on the other hand, what it takes to succeed in the professional world.

This section describes some outcomes of the process by which students aspiring to a career in the legal profession are distributed among American law schools. Recent research indicates that the legal division of labor in the metropolis is related to the social and academic origins of the legal manpower supply. The large law firm seeks out graduates of elite colleges and elite law schools, men who are talented and preferably Protestant.[1] Information is lacking, however, on the determinants of allocation of college graduates among law schools. Given the structural variety of law schools offering professional preparation in the United States, a critical question concerns the effects of achievement and ascribed social status on the allocation of aspiring young lawyers within the multitiered system of American legal education. Data on this topic that are national in scope would enable a determination of the mode of integration between the institutional system of legal education and the organization of the legal profession.

Footnotes

[1] c.f. Jerome E. Carlin. *Lawyers on Their Own*. New Brunswick, N.J.: Rutgers University Press, 1962.

Jack Ladinsky. "Careers of Lawyers, Law Practice, and Legal Institutions," *American Sociological Review*, 28 (Feb., 1963), pp. 47-54.

Dan C. Lortie. *The Striving Young Lawyer*. (Unpublished Ph.D. dissertation, Department of Sociology, University of Chicago, 1958).

Erwin O. Smigel. "The Impact of Recruitment on the Organization of the Large Law Firm, "*American Sociological Review*, 25 (Feb., 1960).

Classifying Law Schools. Questions concerning allocation presume a classification of law schools such that the data can be arrayed to identify the types of sudents who get channeled into types of law schools. An inventory of structural characteristics differentiating law schools might include size of student body: public or private status; the ratio of night-time to day-time students; the number of students per full-time faculty; and the like. A key dimension underlying these organizational characteristics concerns the notion of institutional quality; some law schools are considered elite institutions while others are run-of-the-mill.

In this research law school quality is measured by a single index, albeit one that correlates satisfactorily with other indicators of quality. It is the law school median score of entering students on the Law School Admissions Test (LSAT) administered by the Educational Testing Service.[2] This is a three and one-half hour paper and pencil test required for admission to some eightly law schools constituting about two-thirds of the fully accredited law schools in the United States. It was designed ". . . to make possible for applicants having mental abilities necessary for the study of law to make good scores on the test regardless of the undergraduate curricula they had engaged in."[2]

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[2] John A. Winterbottom and A. Perberton Johnson. The Law School Admissions Test Program. Priceton, N.J.: Educational T sting Service, Sept., 1961, Litho.)

The educational Testing service searched its files for all college seniors in the NORC sample who considered a legal career. Fully 77 per cent of the entering law school students completed the test during their junior or senior undergraduate years. With these data on hand, the schools were ranked as follows:

Stratum I Eight schools ranking highest on median entering scores. They are usually included in the layman's catalogue of top national law schools. The median entering LSAT score in each school was 600 or higher.

Stratum II Sixteen schools rank below the Top Eight on median LSAT scores. The scores range between 500 and 599. While most of these schools would be regarded as solid, substantial schools, they would not rank as top national schools.

Stratum III Some 100 schools attended by students in our sample of aspiring lawyers in the June 1961 graduating classes rank below the national mean of 500 on median scores of their entering students.

Given the foregoing classification, it is now possible to analyze the effects of achievement and ascribed social status on the allocation of entering students to law schools of varying quality.

A measure of talent is provided by NORC's researches on the career choice of arts and science undergraduates. An Academic Performance Index was devised based on the undergraduate grade point average corrected for school quality. Undergraduate schools were classified in terms of the median scores of entering freshmen on the National Merit Scholarship Corporation Qualifying Test, providing the measure of school quality. Achievement on the part of entering law students is given by their score on this Academic Performance Index (API). When the distribution of entering students among the law schools is considered in terms of their undergraduate performance and family income, the data show that academic achievement is a prime determinant of placement in law school. Fully 58 per cent of all High API law students entered the Top Eight law schools; only three per cent of the Low API students are surrounded by Ivy or its regional equivalent. There is a secondary effect, however, when social status as indicated by family income is considered. Controlling for level of academic achievement, ascription does make a difference. Thus, 61 per cent of bright, "rich" boys entered the Top Eight schools in contrast with 43 per cent of the bright "poor" boys. On the other hand, the poor but talented aspiring young lawyer is twice as likely to be admitted to a Stratum I law school as is the rich but mediocre student (only 23 per cent of the latter do so). The primary effects of talent and secondary effects of social status obtain across the board, with the exception of low API men entering Stratum III law schools where equivalent proportions of each family income group are preparing for the Law.

Essentially the same pattern appears when the impact on allocation is shown taking into account achievement and another commonly employed indicator of social status - father's education. A major finding, then, consists of the following: while the data do not provide any guidance in specifying the mechanism at work, the end product of the allocative process is patterned so that primary emphasis is directed to the achievement component while ascribed status appears to influence chances of entry to top quality schools only when talent is held constant. Both the mechanism of self-selection and the mechanism of institutional filtration probably are at work: the C+ student from Podunk is unlikely to apply to the Top Eight and when he does, the gate keepers are unlikely to admit him.

Socioeconomic status as indicated by family income and father's education hardly exhausts the range of statuses subsumed by the concept of ascription. Another major dimension is provided by the student's religious origins. It is clear that religion is an important determinant of the type of practice the young lawyer is likely to undertake after passing the bar examination. Does religion also influence allocation in American law schools? Inspection of the data (not shown here) confirms the importance of talent as a predictor variable but indicates that the pattern of Catholic recruitment of law school differs substantially from Protestant and Jewish patterns, the latter two showing identical distributions.

Talented (i.e., high API) Catholics are half as likely as non-Catholics to be in Stratum I schools and twice as likely to be attending Stratum III law schools. Talented Catholics, furthermore, distribute in equal proportions among the three layers while two out of three talented Protestants and Jews study law at the Top Eight schools. Religious differentials in entry to Stratum I schools completely disappear among students of middling or low academic attainment, the Catholic-non-Catholic divergence reappearing among Strata II and III. Stratum II includes many of the prominent Catholic law schools, and these are the schools which recruit a disproportionate number of Catholic law students from the ranks of the mediocre and the bottom half of the June 1961 graduating classes.

That these patterns of recruitment and selection are determined well before college graduation is revealed when the quality of the undergraduate college is considered together with the student's LSAT score and religious origins. Catholics from "A" quality undergraduate colleges of arts and science, i.e., elite colleges many of which share the same campus with Stratum I law schools, are almost as likely to be attending elite law schools as are Protestants and Jews. But relatively few Catholic graduating seniors with career aspirations in the field of Law attend top quality undergraduate colleges.

Since undergraduate origins are even *more* crucial than performance in distributing students in American law schools (for example, students from elite undergraduate colleges are somewhat more likely to be in Top Eight law schools even if they score *below* 600 on the LSAT than students from other undergraduate colleges who score *above* 600), it is clear that Catholic representation in elite law schools is handicapped by virtue of dicisions on allocation occurring four years earlier.

Unfortunately, it is impossible to unravel the ascription-achievement complex beyond this point insofar as it concerns religious origins. Evidently, competition for undergraduate slots in the elite colleges makes it increasingly more difficult for the young man of proper lineage to gain admission to the preferred colleges *unless* he can compete in the academic market with his non-Brahmin peers whose social credentials are of more recent vintage.

Whatever the reason may be for not attending the "proper" college of arts and science, clearly the consequences four years later are of considerable import for the careers of aspiring young lawyers. In a sense, then, type of undergraduate school attended can be construed as one mechanism accounting for the channeling of young men into law schools of varying quality.

From his study of the Detroit metropolitan bar, Ladinsky concluded that ". . . family and school background give rise to career contingencies, i.e., they act as social 'filters' impinging upon law practice by differentially screening candidates."[3] Carlin's work on the New York City bar[4] also points to the importance of type of college attended, social class and religious origin in distributing students among law schools. In contrast with my finding that Jews and Protestants of equivalent Talent show identical probabilities of placement in Stratum I schools, he found that Jewish origins impose a handicap on entry to Ivy League law schools reflecting, perhaps, an admissions policy based on regional quotas which, in effect, discriminate against New York City Jews. Contradictory findings flow, in part, from differences in definitio and research design. Top National Law Schools as defined in my work include Midwestern and Far Western schools as well as the Ivy variety. Also, studies of the metropolitan bar, of necessity, include lawyers who entered law school without the baccalaureate while the NORC survey of career choice is limited to 1961 Bachelors' recipients. Despite these differences, there is convergence in these studies of the legal profession, all supporting the proposition that the allocation of future lawyers is in full motion by the time they enter law schools.

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[3] Ladinsky. Op. cit.

[4] Carlin, Jerome. Current Research in the Sociology of the Legal Profession. New York: Columbia University, Bureau of Applied Social Research, August 1962, mimeo.).

It is far from clear that the process runs a smooth, unruffled course. Indeed, one could infer that corporate and personal strain is generated by the structure of the legal profession and the organization of legal education. Consider, for example, the role of religion. We learn from Smigel that the graduating law student who combines lineage, talent and personality can call his own shots in the metropolitan job market. But only 50 per cent of the talented (high API) entering law students are Protestant. Furthermore, the entering students who are Protestant, attended elite undergraduate schools and are the offspring of families with 1961 incomes of $15,000 or more comprise a mere 16 per cent of the group of first-year students in Stratum I law schools. Hence, the recruiter for the large law firm may be hard pressed to find the "right" man.

Adaptation seems to be operating at two levels in the face of these constraints. In the long run, the overriding need for technically competent professionals to ensure organizational survival may induce the firms to widen the sluice gates, recruit the requisite legal talent and let the social trappings go by the board. Smigel's study of Wall Street firms indicates that this does happen on occasion. At the same time, the social barriers to professional recruitment grounded solely in performance criteria should influence student conceptions concerning the practice of law and the preferred organizational context for future employment.

Our data provide a hint that the organization of professional practice does have some bearing on the moulding of these preferences. Going on the assumption that law students are not unaware of the career contingencies of their future profession, it follows that more Protestants in Stratum I law schools should report preferences for professional partnerships more frequently than their non-Protestant classmates.

And they do. In the one-year follow-up questionnaire, students are asked to report on employment preferences. Among Protestants in Stratum I law schools, 87 per cent mention professional partnerships as long-run future employment; among Catholics in these schools, the percentage is 69 per cent, and Jews, 67 per cent. While the great majority of all students in the elite law schools mention professional partnerships (and, admittedly, the phrase does not distinguish between the two-man firm and the law factory managed by fifty partners), nevertheless, the religious differential in expectations for this type of life-time employment suggests that law students of minority religious origins attending top national schools are beginning to select themselves out of this one sector of the legal market.

To summarize: We have reported on some of the outcomes of the process by which students aspiring to a career in Law are allocated to American law schools. Correlates of placement, in descending order of importance, were found to be:

1st - academic origins--attendance at elite colleges of arts and science provides the future lawyer with an initial advantage in gaining access to national law schools.

2nd - academic achievement--almost as crucial as attending the right school is performance as measured by the Academic Performance Index and the Law School Admission Test score.

3rd - socio-religious origins--although our data indicate that the combination of talent and proper academic credentials is an almost unbeatable combination, a remaining source of variation was located in the ascriptive statuses of social class and religious origins.

Since the problem of allocation to undergraduate school was beyond the scope of the NORC panel study of career choice, the meaning of attendance at an "A" quality college is itself problematical. Does it signify achievement or ascription, or both? Performance in high school importantly affects admission to college, and to an elite college no less so, but consider the following:

In the first place, socio-economic differentials in rates of entry to college are well documented. Hence, access to professional and technical occupations, including Law, are beyond the grasp of a disproportionate number of lower SES youth. Furthermore, although dropout from college primarily hinges upon academic performance, career choice for those who complete their undergraduate work--and change in career choice during the college years--has a decidedly socio-cultural flavor, My own work, and that of J. A. Davis, show that entering freshmen in the June 1961 graduating classes who chose Law as a career field rank significantly higher in socio-economic status than do other career aspirants. In addition, graduating seniors shifting into Law from other career fields outnumber college men who abandon their freshman choice of Law for other fields. Since the newly recruited law aspirants tend to resemble those who maintain their freshman choice of Law the exchange results in an even more socially homogeneous cohort of prospective lawyers than it was four years earlier.

Putting these findings together, allocation to law school appears to function on the basis of a double contingency. The short-run correlates of allocation emphasize achievement, but decisions on admission to this type of professional school that emphasize performance were paid for in social coin well before the law school admission officer examined student dossiers.

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Work Leisure: The Psychology of Time Utilization[1]

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Work and leisure; employment and free time; work and play represent apparent polarities having to do with ways in which people can choose to expend their energies. Since for any given time period an individual must select one or the other, communalities that suggest that these are not polarities, but rather are different expressions of similar human needs, have been ignored.

What is work? Common usage tells us that work is what you get paid for doing, also work is mowing the lawn or cleaning the kitchen floor, work is playing football with the kids or golf with some friends, work is painting a picture because you like to paint. Common usage suggests that work-leisure, employment-free time, work-play are not polarities with regard to the commitment of energies toward a goal; they are only polarities in the sense that at a given time one must choose one or the other.

There is a considerable literature in social sciences that states a concern about work, but in almost all instances the focus of study is in reality employment. There is an increasing literature that focuses on leisure growing out of the fact that the ratio between employed time and free time is undergoing a shift in the direction of increased free time.

There is not a framework available that attempts to frame the work-leisure problem within common conceptual terms. I would like to offer such a framework with the expectation that such an understanding of the role of work in the life of the individual in its broadest definition -- the commitment of energies toward the achievement of a goal -- can be of value for research and practice.

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[1] Paper previously delivered at Institute for Pupil Personnel Administrators, July 21, 1967.

I am then hoping to differentiate a psychology of work, about which we know very little, from a psychology of employment, about which we know a great deal, and from a psychology of leisure, where knowledge is just beginning to emerge.

A hypothesis that suggested itself to me was that:

Individual's who have learned to commit energies toward goal achievement will characteristically find minimum difficulty in making commitments, within the constraints of the social structure, as they choose employment, chore, leisure and free time activities while individual's who have experienced developmental difficulties in learning to commit energies toward goal achievement will show a consistent inability to make such commitments in any area; or inconsistency and unreliability over time from area to area.

This hypothesis points to a need for a developmental framework intimately tied to personality development.

For the moment I would like to present a descriptive framework with comment on some of the implications.

In this framework, work includes any activity that reflects a commitment of personal resources toward the achievement of a goal. Goal in this framework is defined as activity having meaning to an individual that bears no negative consequences for society. The goal may be intrinsic -- having value because the activity itself is meaningful to the person; extinsic -- having value because of reward, e.g., pay or fear of punsihment, e.g., loss of esteem for others; or some combination of intrinsic and extrinsic. The activity may require active or passive participation, may be physically or demanding or undemanding. The activity may be carried out alone, with the active collaboration of others or merely in the presence of others.

Critical dimensions then are:

1. extrinsic or intrinsic satisfaction
2. active or passive participation
3. demanding or undemanding energy expenditure
4. solitary, collaborative or non-interactive interpersonal modes

Under work are the following categories of energy expenditure:

A. employment includes those activities that emerge from a formal or informal employer-employee or practitioner-client contract involving payment.

B. chore includes those activities of maintenance needing to be carried out such as housekeeping, personal hygiene, repairs.

C. leisure - those activities chosen by the individual independent of obligation, for self-satisfaction; activities having personal meanings and satisfactions, that is intrinsic satisfactions. Within the framework leisure focuses on the activity as gratifying to the self.

D. free time - those activities chosen by the individual to fill time that is not committed in other categories; frequently having an aspect of being with others as more important than the activity itself.

1. The definitions make clear that an invariant correlate of employment is extrinsic satisfaction, just as an invariant correlate of leisure is intrinsic satisfaction. However, while it is true that employment can additionally include intrinsic satisfactions, the occurrence of extrinsic satisfaction, payment or fear of punishment motivation, in leisure shifts the activity from leisure to employment or chore categories. For example, the person who starts painting or potting because the activity itself is gratifying, but whose success leads to the sale of products, may still be receiving the same intrinsic satisfaction as before but is now also employed as a craftsman.

2. Leisure, as defined here, is less characteristic of non-employed activities and gives way to chore or free-time activity. Leisure involving contemplation, creative tasks, solitary pursuit of intrinsically gratifying goals seems culturally less acceptable.

3. Employment and chore activities represent "should" or "super-ego" type motivations while leisure and free time represent "can or may" motivations. Is it likely that Americans are still effected enough by the Protestant Ethic to confuse leisure with impulse expression (sin) and yet finding themselves with increased free time tend to select free time activities, e.g., watching T.V., cocktail parties, etc., because there is a "group sharing" of guilt.

4. All categories, with the exception of leisure, as noted above, can include activities that offer intrinsic or extrinsic rewards; that are active or passive; that are physically demanding or undemanding; that are solitary or collaborative -- but it is less likely that free time is solitary; that solitary leisure is easily maintained without the appearance of extrinsic recognition and some minimal notion that it is close to employment; chore activities are frequently transformable into employment for others -- the service industries-- and that certain groups in the society can decide to avoid these by hiring others to do them.

It is useful to take this view of a psychology work for it begins to generate a new type of research in vocational development. It brings us closer to developmental psychology, closer to dealing with critical problems of our contemporary culture, the concerns about the new freedom that will come from automation, the concerns about the difficulty of re-education that emerge from poverty programs. By increasing our understanding of the generality of work commitment within individuals and the developmental impediments to such commitments we can translate our traditional orientation of vocation as it relates to employment into Wrenn's redefinition for contemporary America -- that "the blending of employed and non-employed work into a whole leads to the ultimate of a committed or responsible whole in which one works both for self-fulfillment and for the fulfillment of others." (8)

The framework combines two major ingredients:

Time utilization - Time is the factor that makes it appear that employment-non-employment is a series of psychologically different activities, for it is most frequently the case that filling time with one class of activities excludes all others during that period.

Psychological meaning of activity - Examination of activities that occur in each of the spheres with the focus on the personal meaning of the activity, the subjective meaning of the activity to the individual reveals interesting relationships between activities carried out in each sphere and the total developmental orientation of the individual.

In examining the literature on this area, it is apparent that the separation of time utilization from psychological meaning has rarely been attended to in studies, that we have little evidence as to the amount of choice over time distribution that is available to individuals, and we have few studies that examine employed time meanings and non-employed time meanings in an attempt to understand communalities or distinctions in personal meaning of the entire range of activities.

Super, in 1941, studied "Avocations and Vocational Adjustment." His findings have relevance for the present framework.

The subjects studied by Super were 273 men, ranging in age from 20-68, who were members of four hobby groups: model engineering, music, photography and stamp collecting. The findings are summarized by Super in the following statements:

> "...the major avocations of employed men often resemble their vocations. The theory of balance (that better adjustment would

> result when the major avocation contrasted rather than ressembled one's vocation) was rejected as a description of the facts of vocational and avocational relationships. Avocations were found to be either extension of satisfying vocations into leisure time or outlets for strong interests not expressed in vocations.
>
> Those with avocations resembling their vocations tend to be satisfied with their work, while those whose vocations and avocations are dissimilar tend to be dissatisfied with their jobs.
>
> We may conclude that what makes for adjustment is not so much a balance of activities as the existence of outlets for dominant interests in one's major activities, especially in one's work."

Super's study, although focused on vocational adjustment, does indicate direct relationships between activities within the employment and non-employment areas.

TIME UTILIZATION:

Goodman (4) surveyed the literature on the division between employment time and free time and found that it was not clear that there is the significant increase in free time that is generally postulated. Her summary of studies and statistical analysis suggests that a critical phrase in evaluating the relationship of employment time to free time is, "It depends."

She states:

> "It depends -- on the occupational level being considered.
>
> It depends -- on the sex being considered.
>
> It depends -- on the date that one takes as a baseline for the past.
>
> It depends -- on the choices that will be open to people and the choices that people will make in terms of free time or more income.

With regard to the occupational level, the most accurate kind of statement that can be made is about the extremes of the occupational scale. If an individual is a highly skilled professional, he has less free-time now than he did in the past and the chances are great that he will have even less in the future. On the other hand, if an individual is an unskilled laborer, he has more free-time than he had in the past, and the chances are great that he will have even more in the future. For those in between these extremes, the predictions seem to be less certain, but with some variation, one can pose a continuum of more free-time available going down the occupational scale."

In the case of women, particularly married women, who may have more choice in how they divide their time, the question becomes a more difficult one. The trends would seem to indicate an increasing tendency for women to exchange their free-time for employment-time although all of them do not do so.

In terms of the date that one takes as a baseline, the statement can perhaps be made that for the population as a whole, free-time has increased considerably using the early 1900's as a baseline. Using the perspective of several centuries, free-time has not increased as much as might have been supposed.

The questionnaire study in Goodman's paper attempted to investigate further whether people would choose income over more free-time. In response to the question:

> "If you had the opportunity and time to work at a second paid job, would you rather have the money it would bring you, or rather keep the free time?"

Ninety percent of the respondents indicated they would choose more free-time rather than more income. This result is opposed to the Swados study of rubber workers which dealt with what people actually did. He found that 15-20% of workers hold down another full time job and another 40% engage in some kind of part-time outside work.

There is a general predilection for people to believe that they have minimal choice in the distribution of how they will use time. Goodman's summary, although attempting to merely document the facts of increases in free time in contemporary American society, leads to a skepticism about the extent to which time is the "inexorable master" and suggests that there may be greater freedom of choice with regard to the individual's planning of the unique distribution of time within a broad range of activities that have personal meaning to him.

Day to day experience, clinical interviews, and research interviews begin to suggest that individuals do not feel comfortable seeing themselves as autonomous, within certain reality constraints, with regard to time utilization. Structure seems more often to be seen as coming from outside the person; imposed to a much greater degree than chosen.

The strange negation of autonomy - of Tiedeman's sense of agency - reflects - I believe - that resistance to personal responsibility for action, and leads to reviewing developmental experiences with relation to "time utilization."

Fraise (3) in his book "The Psychology of Time," Hall (5) in "The Silent Language" both make the case for the extent to which we unknowingly structure our commitments in time terms.

In Engel's clinical study of working boys (1), subjects were encouraged to discuss the regularity or irregularity of time-sequences within the family activities. There was particular focus on family expectation about meal time and bed time. In reading the relevant interview data for these 50 boys, it was impressive to sense the different experiencing of time management within the family. Regular meals, regular bedtime; sanctions or complete lack of sanctions for lateness; time used by parents as reward or as punishment; completely unstructured situations where the boy experienced his commitment to work as a way of binding an unstructured, impulse ridden environment.

There seem to be no studies which focus on such questions as: How time is organized in the home--how its structuring is related to each of the parental patterns; that is when father isn't home, when father comes home, when father is at home. How time investment by parents sets a model for time utilization and energy commitment for the child. Erickson indicates what is communicated about time and its demands:

"Take time: in trifling, in dallying, we lazily thumb our noses at this, our slave driver. Where every minute counts playfulness vanishes." (2)

It is not so long ago that the debate raged over scheduled versus demand feeding for infants. Although the basic intent of these child rearing philosophies was concern over total physical and emotional development of the individual, it interests me that the practices gear themselves to time. Should externally set time organize the life of the infant - or should his own internal clock be the organizer? The shift to permissiveness, with regard to time, at this early age seems not to have led to a continuing orientation in child rearing that elevates internal, personal decisions about time utilization to a prime orientation in child rearing.

Rather the experiences through high school graduation tend to place the developing person in a structure where decisions regarding time utilization are externally derived and set, frequently with minimum regard for the child and maximum regard for the "reality" of parent and school.

I do not believe in a completely child oriented family structure - but I do believe that where we rationalize behavior that is best for us as being the best for the child - and therefore rule out the child's learning that we are arbitrary for our comfort, we perpetuate the difficulties in reaching for autonomy, for a sense of agency and reduce awareness that there is a time when responsibility for time utilization is a personal choice.

I suspect that a general experience of this kind is the imposition of a "bedtime" on pre-school children. The freedom of children from birth to entry into school from reality demands in the morning suggests to one that the imposing of a "bedtime" has less to do with child comfort - more to do with parent comfort. What difference does it really make if the three year old sleeps from 8 P.M. - 7 A.M. or 11 P.M. - 10 A.M.? If adult needs to use their time are such that it helps them to make personally meaningful choices of activities if young children are asleep by a particular time - the setting of bedtime within such a context, communicated to the child honestly and appropriately may lead to a different orientation with regard to time as an adult than the more frequent rationalized - "the authority says it's good for you - that's the way it is done."

All of our major institutions tend to continue the rationalizations - this is best for the child; rarely communicating that as adults and decision makers in institutions the setting of time is for our convenience; and is our right.

The extent of control - or the sense that there is control - from outside becomes so ingrained that we feel befuddled, confused, and ill at ease when freedom to do our own controlling is given.

I elaborate to the point that you may feel is ridiculous because the "decade of man" as I view it must involve increasing awareness of choices, increasing willingness to be autonomous, to seek and relish responsibility, and to learn the outer limits of one's freedom; rather than to limit one's freedom without questioning and testing what the limits may really be.

I have not addressed myself to some of the other developmental sequences that relate to learning about time utilization such as identification with parental patterns of time utilization for I wish to go on to relate the awareness that there needs to be increased realistic involvement with maximizing the sense of control over time to the psychology of work.

Employment, chore, leisure and free time represent the categories to be scheduled. Each category sets up activities to be carried out; for many of them there are specific social sanctions. Some of your schools, I believe, even have sanctions as to the frequency with which your students must attend to the chore known as "getting a hair cut." We constantly allow ourselves to confuse social sanctions - externally determined demands and assignments with giving up of freedom of choice as to the personal meaning an individual chooses as relevant to his satisfactions in each of these areas. For example, whenever I hear a group of people griping about their working conditions, as though they are puppets manipulated by the puppet-master called "boss" - I confront them with the fact that they do have freedom to choose - they can quit. Usually such a confrontation helps them to recognize that they are in a choice situation, makes them more uncomfortable as they begin to see their responsibility - their autonomy, but I think ultimately helps them to mobilize energies toward an evaluation of the positive personal meaning of the activities against what they perceive as negative within the context. Some stay put as passive as ever, some stay put, but the awareness of choice frees them to try to change the situation, some quit.

The framework of education, these days, tends to communicate to a child through school personnel and parents little of the awareness of choice of activity within the context of time utilization. The cry is "you must do prescribed activities to be eligible for more years of prescribed activities to be eligible for more years of prescribed activities." We teach, I suspect, like some kindergarten teachers who worry more about the reaction of the first grade teachers to the children's "readiness" and its reflection on their competence as Kindergarten teachers, than we worry about learning as a meaningful activity in and of itself.

If the next decades represent an increasing confrontation of man with time that is not required for sustenance activities, time that is available for him to choose a multiplicity of available activities that are meaningful to him, we need to gear our child rearing practices and our educational frameworks to focus on commitment to personally meaningful activities in time spaces; we need to honor, although not necessarily reward, the student who chooses to not do a particular assignment because he has chosen to fill that time period with leisure - painting, reading one of the great books - we need to be concerned because now-a-days such behavior may not be choice of position personally meaningful activity chosen autonomously to utilize time that is responded to with responsibility - but is rather defiance.

It is here that pupil personnel services begin to play a significant role.

Rather than vocational development, we need to refocus onto "work" commitment and the decisions as to distribution of time over the categories that involve commitment of energy resources in a variety of ways; rather the educational planning we need to refocus onto commitment to learning; rather than representing the "establishment," we need to refocus on helping the individual to establish himself with a framework of personally meaningful activities that bear no negative consequences for society.

Margaret Mead (1918) in commenting on the predicted increase in non-employed time states:

"And the minute it looks as if there would be more time in between work and good works than the amount needed for "healthy recreation" alarm spreads over the country... People are going to have too much leisure... unearned time...loose time, time which, without the holding effects of fatigue before and fatigue to come, might result in almost anything...boredom, apathy, frantic efforts to fill up the time...too much drinking, promiscuity, reckless driving, etc."

Bertrand Russell predicts:

"With modern techniques, it would be possible to distribute leisure justly without injury to civilization.

Without the leisure class, mankind would never have emerged from barbarism. Now instead of a hereditary leisure class, there will be opportunity for everyone to be of the leisure class. Ordinary men and women, having the opportunity of the happy life, will become more kindly and less persecuting and the taste for war will die out."

Mead sounds more "with it" in her gloom than does Russell in his utopia as one reviews headlines of 1967. But, I suspect - or more realistically hope - that active involvement in recognizing and helping others to recognize that work is not employment; that work-leisure is not dichotomous; that we can choose to utilize time in autonomous, responsible ways for activities having personal meaning to us and no negative effect on society can effect headlines of 1977, 1987, and 1997.

Shall it be Mead or Russell?

Report of Recent Findings

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I want to talk today about some of my own research efforts and to get from you some more cogent criticisms than I normally receive, since I am interested in finding out what is wrong and where I can go from here.

I assume you have some familiarity with what I have been doing: The world is made up of six kinds of people and six environments and we are concerned with the interaction of these. I then put this together with what I think about vocational choice. But unless I can establish the validity of these formulations the whole "world theory" collapses. So I spent some time searching around to find out what people are like and then to define some characteristics. It is difficult to find out what people are like who go into special fields or major in special areas. There are a lot of studies comparing people who aspire to certain things, e.g. business administration, art and literature; but then the studies stop. What is needed is descriptions of a wide range of areas.

Interest Types. What we did was classify people as being of these six types, and then looked at various kinds of information. Table 1 is a statement of the group hypothesis of six kinds of people. Table 2 presents the correlations between vocational interest scores on the Vocational Preference Inventory (VPI) and certain life goals and values. Table 3 shows the relationship between interests and self-ratings. These results seem to make sense.

Table 4 is a very important table. On the left hand side is a list of the kinds of competencies a person may have. A checklist of competencies was used; the things a person says he can do and do well. This table shows the relationship between scores on the VPI interest scales and competencies. They show a fairly decent correspondence, indicating that people with various kinds of interests do know what they can and cannot do.

Table 5 relates parents' attitudes with childs' occupational interests. It is a poor relationship but makes sense with regard to the typology. The PARI is interpreted in terms of such things as "control of the child". Where control has involved strictness or suppression of aggression, interests tend to be in Conventional areas. This is what you might expect from a child with that kind of background, e.g. inability to cope with one's inner resources and feelings.

In general, the kinds of parental attitudes noted here result in interests clustering around the Conventional area, but the correlations are not high. (As an interesting sidelight, note that suppression of sex is related to having enterprising interest: Just as Freud said, the entrepreneur thinks he is very popular with the opposite sex.)

In table 6 we developed a list of traits and abilities on which students rated themselves and typical persons in the vocations that they were planning to enter. We found that people rate the future occupations as you would expect on these traits, and that they do have certain pictures as sterotypes, i.e. the traits listed are what you would expect for people in that area. Analysis of variance of the mean ratings indicated that 90% of these are significant at .01 level.

Tables 7, 8, 9, are attempts to get more information about what people are like who aspire to different fields. They show student characteristics associated with choice of occupation.

Environmental Assessment Techniques (EAT). Our hypothesis of six types of people led to the notion that if people in different occupations had different types of characters this must mean that if you get groups of people in the same occupation you ought to get a particular kind of atmosphere.

For example, the atmosphere created by a group of college professors is very different from one created by a group of ministers, or from a group of liquor salesmen. So if the theory has any validity, when you sort people into different types you ought to get environments of different characteristics.

Table 11, is an attempt to test out this idea. We correlated Pace's College Characteristics Index (CCI) and EAT mean scale scores for 36 institutions with the percentage of students who fall in the six areas at that institution. That is, we classified all students at the institution according to major area (see Table 10) and computed the percentage of the whole.

A big university will have a wide variety of students and you get a different kind of profile from a small institution If the theory makes any sense, correlations should exist between the environmental figures and the kind of student body. Table 11 shows the correlation between these percentages and the mean scores (what the students say about the environment). For example, Humanism correlates - .81 with Realism. This suggests that you can predict what the environment is like by doing a test of the type of students at that institution. When size of student body and intelligence are added, you can predict the environment better than you can from the theory alone. So then you have to say other things such as IQ and size being equal, the theory is good. Nevertheless, the relationship suggests that there is this possibility.

All of the previous data has been from samples of National Merit finalists, but in Table 12 we have a normal sample of college freshman whose average ability level is at the national norm, selected from a variety of institutions. We have here picked out a series of competencies, life goals, self-ratings, personality, attitudes, etc., to see whether these things go with the right types. For example a person with scientific competencies has a mean score of 5.22 with Intellectual interests which is the way that it should be.

Vocational choice. Some time ago, in the process of doing one of these studies, I had an opportunity to compare how well a student's expressed choice predicts what he will say about what he is going to do four years later. A comparison of predictions from expressed choice and from selected scales of the SVIB was done. We found that expressed choice had an efficiency over four years of about 50%, and the SVIB of about .8. In the same study, we asked students what they planned to become, and if they couldn't do that what would they do, and if not that, what would be the third thing. We discovered that expressed choice itself had a predictive validity one year later of about 68 to 70%, using the same six categories for classifying choice. When we speak of "hits" we mean the person giving a response falling in the same interest category both times, such as physics as a first choice and chemistry as the second choice. When first choice was the same category as second choice, the predictive validity was 75 to 78%. When all three fell in the same category, predictive validity was 81%.

We were concerned with predicting a student's final vocational choice from his first choice eight months earlier. We asked people when they entered college and at the end of the year, "What do you want to be?" Table 13 shows the classification of vocations and major fields used for men. Table 14 shows what happened "hits" averaged around 68%. Table 15 shows that when two choices fall in the same category, such as teacher and social worker, the "hits" average at about 78%.

In essence, when you ask a person what he wants to become, this is sort of a cheap vocational interest inventory, and in some ways it is better than most. We used the VPI as a way of demonstrating that vocational interest inventories are not as good. The efficiency of prediction achieved by using the peaks on that inventory (VPI) averages out at 46% which makes the inventory a loser. (see table 16)

We had to have a special classification scheme for women (Table 17) because so many women were characterized as social. Table 18 shows the results for women. Results for men and women were really very similar. Table 19 summarizes the percentage of correct predictions for both men and women.

We did the whole thing over a second time with a sample of about the same size, for which we obtained the first choice at the beginning of the freshman year and the second at the end of the sophomore year.

We found that just asking the student gives "hits" on the average of 68%. Using the highest scale of the VPI you get 45.1% (which is pretty good for a questionnaire). If the person gives you two choices falling in the same area you get 82.5% "hits", and if you take people who give you choices in different areas, social work first time and physics the second, the percentage of "hits" is 64.2. The same figures hold for women only slightly higher: expressed choice predicts about 78% of the time; highest scale on the VPI predicts 59.6%; both choices same, 86.4%.

I have gone back into Strong's book and tried to discover just how good is expressed choice. One ten year study showed a 50% efficiency. What is needed is a standard classification that everybody knows about. Most studies are concerned with showing that interest tests are better than anything; as a result you cannot reconstruct how good the test really was, nor do they define what they mean by a hit or a miss.

Table 20 is a summary table showing the percentage of "hits" for various combinations of first two choices the same and first and second choices different, for both men and women. The top row is related to roles - whether a person wants to be a practicioner, teacher, etc. The underlined ones are those that were expected to have the highest prediction, i.e. certain roles are assumed to go with certain classes.

On the whole this makes sense, although we need more data since some of the predictions did not work out too well. For example, social falls with teacher, which makes sense. But the N is so variable, that it is hard to know whether low relationships are a result of insufficient N or the theory is not sufficient. But if you look at the total percentages across the first section (1st and 2nd choice same) and second section (1st and 2nd choice different), when first and second are the same, percentages of hits are consistently higher. This gives some idea of the efficiency of using the first two choices for making classification; e.g. under undecided % is 69.7 as opposed to 50.7. You get increased efficiency beyond what you can predict from a test by asking a person what he wants to do and also asking for role.

When a person is undecided or cannot name an occupation and a role, for that group the percentage of "hits" is very low. I interpret this to mean that this is a "poor man's" measure of vocational maturity - if a person can name two occupations in the same area, he seems to have cleared up what he wants to do and where he wants to go. In addition, if he knows what role he wants to play he is a lot further along than the person who does not or than the person who is not consistent in choice of areas.

In the process of doing this study it seemed important to find out what happens when you use the best characteristics of the inventory according to theory and to see if you can manipulate the hits up and down and the way they ought to go. Many of the things that a counselor may observe may make sense and some may not, e.g. you find a boy who is high on clerical and also high on the arts. The next study I want to talk about was concerned with the consistencies and inconsistencies in profiles. Music and skilled trades would be inconsistent. We had 32 combinations, 14 of which were consistent and 12 which were inconsistent. So we first characterized a profile along this dimension (see Table 21).

Then we took a measure of homogeniety---the difference between the highest and lowest score on the profile. A homogenous profile is jagged, and it means that the subject has well defined profile, with certain things high and others low. A heterogenous profile is a flat profile with no distinctly defined interest areas.

With regard to choice of role - if the person can give a specific role, e.g. teacher, researcher, etc, he has an explicit role concept. If the person gives you a role which is inconsistent or if he is undecided about role, that person is said to have an ambiguous role concept. When you sort these out, the person that has a (1) consistent profile (homogenous - some high and some low), (2) two choices that go together, and (3) an idea of an explicit role, for this person predictive efficiency is 51.8%.

The VPI alone gives you only about 44%, so this is a slight impovement. But notice that this is still below what simply asking the person would give you (which is 68%). This is not to say that a skilled counselor with the SVIB couldn't get 70% or higher. However, most counselors do not see this ideal person that I have described here, but rather see the boy who has a profile that doesn't make a great deal of sense. He may have two peaks which don't go together or he has a flat profile; and the counselor does not know what to do about it or how to interpret it. Furthermore, the student cannot tell you what roles he wants to play. For this person "hits" are only 25.6%, not much beyond chance. As we go up the scale things get better, until we reach the ideal person I described earlier.

After doing this table we realized that we should have controlled for the highest peak on the profile itself and hold that constant. So we took all the boys who peaked on each of the six scales and did the table over. But most of the subgroups are so small that you get the same things. However, in doing the analysis over, the range was greater, 19% (low chance) to 68% (which is just what you could get by asking the boy alone).

Next we took people for whom the test backed up what the student said, and we found that this kind of analysis increased the efficiency within 2/10th of a percent, and overall 4%.

An analysis of people for whom the test said something different than the person said, the student came out to be the big winner. The test has an efficiency of 9% and the student, 50%. Apparently, he knows most about what he wants to do.

Environment and Vocational Choice. What happens when students in a college get together, what are the interactions? And does the theory hold up? To answer this, we first studied the profiles in a simple way: we asked what happens to people who have the same peaks on VPI but differ on the second scale. Does the second scale tell you what that character is like? For people who peak on social but differ on the other five scales, are these differences according to theory? Taking it one step further, we took people who peaked on the first two scales, and does the third digit detect some differences and are these differences according to theory? In general it held up.

Can we determine a code for a college? We coded the environmental variables six digits. We also calculated the percentage of stability at a school. What percent of the students are in an area, e.g. realistic - engineering, and what percent stay in that same area over a one-year period. Six percentages of stability were thus established. There is quite a bit of variability within and between schools.

We correlated the stability and the code of the school, and as theory would suggest there should be a positive correlation. For example, for a large state university which has a social code, and where students are mainly interested in social fields, the students should be fairly stable. In contrast, consider the person interested in art at an institution which has only 3% of the students interested in the arts. This is a grandiose test of a "congruency hypothesis": if most people are like you, you get reinforced and you stay there.

Table 22 shows the correlations of the two percentages, but with an N of only 6. Positive correlations are more than would be expected by chance. This I would call very tenuous.

Table 23 is a similar analysis attempting to clarify what is happening. At each college we have a rank or estimate of strength of the environment of that school, and we have a percentage rank of stability at that school. Then we ranked across college so we could see how the strength of number of people in a particular environment affects the stability of peoples' vocational choices. Results are basically the same with some negative correlations and with some rather high positive correlations also. This analysis shows more explicity what is going on, correlating one environmental variable against one percentage of stability. Again this lends support to the congruence hypothesis that people gain support by being around people of the same character.

Table 24 shows the correlation of stability of vocational choice with homogeniety and size of an institution. By the theory you would expect that a school with a jagged (homogenous) profile ought to keep people more stable, because there is only one or two things that a person ought to be studying at that school. Whereas, in a school with a flat (heterogeneous) profile students will go in all directions. We found that the correlations are positive but that only one is significant. (Part of this may be a function of N or part because it is not a very good hypothesis). Size does not correlate as well, and is even negative in one instance. My interpretation is that homogeniety is a better indicator partly because it incorporates size. That is, homogeniety is a complex variable which includes types of people, categorizations, as well as merely size.

All of this lends support to what happens; people are more likely to be stable if they enter a college where there are lots of people like them, and where the environment is homogeneous. They are more apt to change, if they go to a place that has many different kinds of characters, and in which they are in the minority in terms of vocational area or major field. These effects in correlational terms are high compared to other measures you might find. However, relative to the student characteristics, the input of the institution for predictive efficiency is still very small. I have not dealt with the analysis of satisfaction in college, but in essence people are happier or more satisfied if they are in institutions where they are in the majority.

Concluding remarks. Typology itself has a somewhat negative and inadequate connotation to it. Yet we all make use of typologies. What is important is what use is made of a typology and not necessarily whether it is right or wrong. My typology has had value for me in leading toward certain ideas and understandings. This is what is important.

The labels, Realism, Intellectualism, etc., are a short hand method, and do not imply all-inclusive categories. Personality types don't work that well in reality. Nobody fits the types exactly. They represent patterns, and serve as six extreme models. We know there are not just six kinds of people in the world. What you get is a large number of combinations of these patterns. A person does not have to be completely like any one of these. But we might ask, which is the person most like?

Reference

Holland, J. L., & Lutz, Sandra W. Predicting a student's vocational choice. Iowa City: American College Testing Program, 1967.

Table 1

Holland Typology

Class
1. Realistic
2. Intellectual
3. Social
4. Conventional
5. Enterprising
6. Artistic

Table 2

The Relation of the Vocational Preference Inventory to Expressed Goals and Values (Boys)

Goals and Values	1 Real	2 Int	3 Soc	4 Conv	5 Ent	6 Art
1. Being well dressed		-.23		.12	.24	
2. Producing a lot of work				.14	.13	
3. Becoming happy and content			-.15			-.28
4. Inventing a valuable product		.28				
5. Helping others who are in difficulty			.29			.15
6. Becoming famous in one of the performing arts				-.14		.31
7. Developing a meaningful philosophy of life			.18			.29
8. Becoming an authority on a special subject in my field		.24		.16		
9. Making sacrifices for the sake of the happiness of others			.20			
10. Being a community leader			.17		.41	
11. Becoming a competent teacher or therapist		.13	.27			.20
12. Becoming influential in public affairs	-.17		.19		.37	.19
13. Becoming a mature person					.14	
14. Following a formal religious code				.13		
15. Having the time and means to relax and enjoy life			-.14			-.14
16. Making a theoretical contribution to science		.48			-.29	

Table 3

The Relation of VPI Scales to Self-Ratings

	Boys (N=276)					
Self-Ratings	1 Real	2 Int	3 Soc	4 Conv	5 Ent	6 Art
Emotional Stability				.15		
Originality	-.17					.28
Clerical Ability				.25		
Leadership					.23	
Understanding of Others			.28			
Drive to Achieve				.14		
Math Ability		.31				
Scholarship				.13		
Sociability					.29	
Artistic Ability						.46
Scientific Ability	.23	.54				
Writing Ability	-.19					
Expressiveness						.36
Self-Confidence (Social)		-.17			.22	
Liking to Help Others	.35		.26			.24
Cooperativeness			.25			
Popularity with the Opposite Sex					.22	
Interest in Religion			.30			
Research Ability		.36				
	Girls (N=226)					
Originality						.25
Clerical Ability				.22		
Aggressiveness					.17	
Mechanical Ability	.23	-.20				
Understanding of Others	-.14		.16			
Self-Understanding	-.16					
Math Ability		.21		.16		
Artistic Ability				-.19		.31
Scientific Ability		.44			-.19	
Writing Ability						.27
Expressiveness					.18	.23
Liking to Take Chances			-.18			
Absent-Mindedness	-.16					
Research Ability		.32				

Note. --All r's are significant beyond the .05 level.

Table 4

The Relation of Student VPI Scores to Various Self-Reported Competencies

Competencies	Real		Int		Soc		Conv		Ent		Art	
	M	F	M	F	M	F	M	F	M	F	M	F
Scientific Competency	15	19	41	39	04	08	-02	01	00	05	07	11
Technical Competency	36	25	18	18	-10	03	05	11	03	13	-07	07
Govt. & Social Studies Competency	-06	05	13	13	20	11	06	-04	18	13	21	20
Athletic Competency	08	09	11	10	06	07	01	-01	14	13	02	06
Business & Clerical Competency	00	03	07	03	11	10	22	22	26	20	08	06
Social & Educational Competency	-04	00	08	01	37	33	11	04	30	26	25	18
Homemaking Competency	12	05	11	04	18	12	10	08	14	11	16	07
Arts Competency	-03	06	14	11	25	18	06	-01	21	25	51	45
Leadership & Sales Competency	-02	01	11	06	29	24	16	07	35	29	25	20
Foreign Language Competency	-05	01	14	08	13	05	04	-05	10	08	18	16

Note. --Men = 3771; Women = 3492.

Table 5

Product-Moment Correlations Between Mother's Attitudes (PARI) and Child's Occupation 1 Preferences

PARI	Real		Int		Soc		Conv		Ent		Art	
	M	F	M	F	M	F	M	F	M	F	M	F
Fostering Dependency		-14										
Seclusion of Mother	11											
Martyrdom								16		11		
Strictness			-08					12				
Excluding outside Influences								15				
Suppression of Aggression				-13			09	12				
Equalitarianism											11	
Approval of Activity							08					
Avoidance of Communication								11				14
Suppression of Sex	12						10		09			11
Ascendency of Mother			-09									
Intrusiveness									08			
Acceleration of Development	08							11	09	16		

Note.--All correlations are significant beyond the .05 level. Correlations based on 649 boys and 345 girls. VPI, 1959 sample.

Table 6

Student Characterizations of the Typical Person In Their Chosen Vocation (Boys)

	Realistic	Intellectual	Social
High on:	Mechanical Ability Practical-Mindedness	Mathematical Ability Scholarship Independence Scientific Ability Liking to Think Liking to Work Alone[a] Research Ability	Emotional Stability Understanding of Others Self-Control Cheerfulness Self-Understanding Physical Health Liking to Help Others Cooperativeness Sense of Responsibility Interest in Religion Sense of Humor
Low on:	Speaking Ability Independence Writing Ability Expressiveness Self-Confidence (Intellectual) Self-Understanding Introspectiveness Liking to Think Liking to Work Alone Sense of Humor	Leadership Popularity Sociability Self-Confidence (Social) Popularity with Opposite Sex Interest in Religion Friendliness Physical Attractiveness Artistic Ability Aggressiveness	Originality Clerical Ability

	Conventional	Enterprising	Artistic
High on:	Clerical Ability Popularity Conservatism Self-Confidence (Intellectual) Introspectiveness Well Organized Liking to Work Alone[a] Sense of Responsibility[a] Absent-Mindedness Popularity with Opposite Sex Friendliness Physical Attractiveness	Leadership Sociability Aggressiveness Neatness Speaking Ability Self-Confidence(Social)	Originality Artistic Ability Writing Ability Expressiveness Reading Ability Self-Criticalness

Table 6--page 2

Conventional	Enterprising	Artistic
Low on:		
Understanding of Others	Scientific Ability	Emotional Stability
Liking to Help Others[a]	Absent-Mindedness	Mechanical Ability
	Self-Criticalness	Mathematical Ability
		Scholarship
		Neatness
		Self-Control
		Conservatism
		Practical-Mindedness
		Cheerfulness
		Physical Health
		Well Organized
		Liking to Help Others[a]
		Cooperativeness
		Sense of Responsibility
		Research Ability

[a] Mean for this self-rating with one or more means in the other five groups.

Table 7

Student Characteristics Associated with the Choice of Physical Sciences

Men	Women
High Means	
Scientific Potential	Scientific Potential
Scientific Achievement	Scientific Achievement
Academic Type	Academic Type
SR - mathematical ability	SR - mathematical ability
SR - scientific ability	SR - scientific ability
SR - research ability	SR - research ability
G - Inventing or developing a useful product or device	G - inventing or developing a useful product or device
G - theoretical contribution to science	G - theoretical contribution to science
G - technical contribution to science	G - technical contribution to science
Intellectual (VPI)	Scientific Competency
SR - drive to achieve	SR - scholarship
SR - intellectual self-confidence	SR - independence
G - authority on special subject in my field	G - meaningful philosophy of life
G - making parents proud	G - exciting and stimulating activities
G - good physical condition	Satisfaction with College Choice
Low Means	
SR - sociability	SR - sociability
SR - cheerfulness	SR - cheerfulness
SR - social self-confidence	SR - social self-confidence
G - good spouse	G - good spouse
G - good parent	G - good parent
Enterprising (VPI)	Leadership Potential
Business and Clerical Competency	SR - popularity
SR - athletic ability	G - making sacrifices for others
SR - understanding of others	G - becoming a community leader
SR - speaking ability	G - avoiding hard work
SR - self-control	Psycho-Sexual Status
SR - expressiveness	Importance of Finding a Suitable Mate
G - following formal religious code	
G - self-sufficient	
G - producing good artistic work	
G - becoming accomplished musician	
G - expert in finance and commerce	
G - finding a real purpose in life	
G - being active in religious affairs	

Note.-- In this table, G=life goal or aspiration, and SR= self-rating.

Table 8

Student Characteristics Associated with the Choice of Social Sciences

High Means

Men	Women
Social (VPI)	Social (VPI)
Non-Conformist Type	Non-Conformist Type
G - mature and well-adjusted	G - mature and well-adjusted
G - good parent	G - good parent
Size of High School Class	Size of High School Class
Self-Control (VPI)	G - good spouse
Social & Educational Competency	
SR - popularity	
SR - understanding of others	
SR - sensitivity to the needs of others	
G - becoming a community leader	
Low Means	
Expected Income	Musical Potential
G - helping others	Artistic Achievement
G - accomplished in performing arts	SR - conservatism
G - authority on special subject in my field	SR - practical-mindedness
G - making parents proud	
G - making sacrifices for others	
G - good physical condition	
G - expert in finance and commerce	

Note.--In this table, G=life goal or aspiration and SR= self-ratings.

Table 9

Student Characteristics Associated with the Choice of Business and Administration

High Means

Men	Women
Conventional (VPI)	Conventional (VPI)
Enterprising (VPI)	Enterprising (VPI)
Business and Clerical Competency	Business and Clerical Competency
Collegiate Type	Collegiate Type
G - well-off financially	G - well-off financially
G - being well-liked	G - being well-liked
G - good parent	G - good parent
G - executive responsibility	G - executive responsibility
G - expert in finance or commerce	G - expert in finance or commerce
Athletic Competency	Range of Experiences
SR - practical-mindedness	Leadership Achievement
G - becoming happy and content	Vocational Type
G - following formal religious code	Expected Vocational Achievement
G - receiving awards or recognition	SR - understanding of others
G - self-sufficient	SR - conservatism
Satisfaction with College Choice	SR - perseverance
	SR - making parents proud
	G - becoming a community leader
	G - good spouse
	G - successful in own business

Low Means

Men	Women
Scientific Achievement	Scientific Achievement
Preconscious Activity	Preconscious Activity
Academic Type	Academic Type
SR - scholarship	SR - scholarship
SR - scientific ability	SR - scientific ability
SR - acting ability	SR - acting ability
G - good artistic work	G - good artistic work
Scientific Potential	Intellectual (VPI)
Musical Potential	Artistic (VPI)
Musical Achievement	Acquiescence (VPI)
Total Competencies	Intellectual Home Resources
Athletic Competency	Dramatic Arts Achievement
Social and Educational Competency	Scientific Competency
Leadership & Sales Competency	Arts Competency
Interpersonal Competency	Highest Level of Education
Expected Vocational Achievement	SR - originality
SR - leadership	SR - artistic ability

Table 9--page 2

Low Means

Men	Women
SR - popularity	SR - aggressiveness
SR - drive to achieve	SR - self-control
SR - independence	SR - expressiveness
SR - practical-mindedness	G - becoming outstanding athlete
SR - intellectual self-confidence	G - self-sufficient
SR - perseverance	G - good physical condition
SR - popularity with opposite sex	G - real purpose in life
SR - research ability	Consultation with Professional Person
G - theoretical contribution to science	

Note.--In this table, G=life goal or aspiration and SR=self-rating.

Table 10

College Major Fields Corresponding to each of Six Personal Orientations

Orientation	Description (from Holland, 1962)	Relevant Major Fields
Realistic	"masculine, physically strong, unsociable, aggressive. . .prefers concrete to abstract"	agriculture, agricultural education, physical education, recreation, industrial arts, engineering, forestry, trade and industry
Intellectual	"task-oriented, intraceptive, asocial, prefers to think through rather than act out; needs to understand"	architecture, biological sciences, geography, medical technology, pharmacy, mathematics, philosophy, physical sciences, anthropology
Social	"sociable, responsible, feminine. . .needs attention. . . avoids intellectual problem-solving. . .orally dependent"	health education, education of exceptional children and mentally retarded, speech correction, education (unclass.), nursing, occupational therapy, physical therapy, social science (general), American civilization, sociology, social work
Conventional	"prefers structured numerical and verbal activities and subordinate roles. . . conforming. . .identifies with power, externals, and status"	accounting, secretarial, business and commercial (general and unclass.), business education, library science, economics
Enterprising	"verbal skills for dominating, selling, leading others. . . orally aggressive"	hotel and restaurant administration, hospital administration, history, international relations, political science, foreign service, industrial relations, public administration
Artistic	"asocial; avoids problems which are highly structured or require gross physical skills. . .intraceptive. . . need for individualistic expression"	art education, music education, English and journalism, fine and applied arts (all fields), foreign language and literature (all fields)

Table 11

The Relation of Eight Environmental Measures to the College Characteristics Index at 36 Institutions

CCI Scales	Size of student body	Intelligence of student body	Personal Orientations[a]					
			Real	Int	Soc	Conv	Ent	Art
Abasement	20	-37	38	-29	04	11	-24	-45
Achievement	-59	64	-20	33	-22	-35	42	35
Adaptiveness	14	-55	14	-39	26	13	-25	-20
Affiliation-Rejection	-35	08	-21	38	-01	-07	05	16
Aggression-Blamavoidance	64	09	45	09	-25	08	-38	-58
Change-Sameness	-06	17	20	14	-14	-02	-10	-09
Conjunctivity-Disjunctivity	-19	06	-06	16	-07	-24	22	12
Counteraction-Infavoidance	-58	49	06	28	-41	-29	11	19
Deference	54	-63	26	-55	20	30	-38	-26
Dominance	-19	21	-21	32	08	-02	03	09
Ego Achievement	-02	-19	-34	-13	38	12	15	24
Emotionality-Placidity	-33	23	-25	21	-14	18	20	14
Energy-Passivity	-55	48	-05	31	-35	-42	28	33
Exhibition-Infavoidance	53	-45	-14	-33	43	36	-15	-03
Fantasied Acheivement	-55	49	-32	46	-17	-21	35	38
Harmavoidance	-30	26	-50	04	21	-14	55	56
Humanism	-28	55	-81	23	25	07	79	64
Impulsion-Deliberation	27	00	11	28	-08	23	-28	-40
Narcissism	49	-36	-17	-43	59	01	01	18
Nurturance-Rejection	-03	-26	-37	-18	39	-06	22	46
Objectivity	-42	68	-26	46	-24	-26	40	31
Order	28	-51	-05	-31	36	15	-10	-03
Play	47	-60	25	-34	35	04	-36	-30
Pragmatism	52	-67	73	-32	-08	02	-73	-66
Reflectiveness	-29	50	-62	16	14	01	64	54
Scientism	-18	31	33	38	-43	-08	-22	-48
Sentience	-28	47	-70	10	31	-13	71	69
Sex-Prudery	54	-40	-22	-24	53	15	01	06
Succorance-Autonomy	-01	-28	-09	10	14	24	-14	-13
Understanding	-58	70	-28	46	-23	-24	41	33

Not.--r_{05}= .33, r_{01} = .43. Decimal points omitted in table.

[a] The percentage of college majors falling in each class.

Table 12

Student Characteristics Associated with VPI Scale Peaks (Men)

Student Characteristics		VPI Scale Peaks						F
		Real (N= 885)	Int (N= 1774)	Soc (N= 845)	Conv (N= 428)	Ent (N= 798)	Art (N= 630)	
Competencies								
Scientific	X	3.85	5.22	3.53	3.43	3.43	3.66	110.81
	SD	2.34	2.48	2.35	2.28	2.38	2.47	
Technical	X	14.63	12.99	10.82	11.94	12.26	10.78	94.34
	SD	3.68	4.44	4.41	4.14	4.36	4.82	
Business	X	1.61	1.95	1.82	2.39	2.31	1.92	33.48
	SD	1.26	1.38	1.31	1.36	1.33	1.39	
Social and Educational	X	4.60	5.51	6.68	5.48	6.15	6.30	55.87
	SD	2.83	2.99	2.76	2.92	2.86	2.97	
Artistic	X	5.44	7.32	7.39	6.02	7.21	12.32	125.15
	SD	4.67	5.67	5.46	5.24	5.84	6.39	
Leadership	X	3.23	4.34	4.77	4.37	5.20	4.99	45.42
	SD	2.60	3.07	3.07	3.05	3.16	3.13	
Life Goals								
Developing useful product	X	1.60	1.75	1.36	1.41	1.48	1.43	43.96
	SD	.77	.84	.64	.71	.72	.72	
Developing scientific theory	X	1.53	2.10	1.38	1.35	1.38	1.45	174.03
	SD	.75	.95	.68	.65	.69	.72	
Producing artwork	X	1.37	1.39	1.34	1.25	1.36	1.95	67.46
	SD	.74	.74	.69	.63	.73	1.06	
Becoming expert in finance & com.	X	1.67	1.61	1.61	2.80	2.35	1.64	200.66
	SD	.80	.84	.83	1.00	1.05	.87	
Active in religious affairs	X	2.64	2.51	2.70	2.72	2.55	2.32	14.13
	SD	.98	1.03	1.04	.97	.98	1.12	
Exec. resp. for work of others	X	2.29	2.28	2.28	2.77	2.73	2.19	56.83
	SD	.82	.87	.88	.87	.86	.93	
Self-Ratings								
Originality	X	2.21	2.47	2.38	2.26	2.48	2.85	65.35
	SD	.66	.74	.74	.69	.73	.76	
Mechanical ability	X	2.72	2.37	1.90	2.11	2.08	1.95	105.65
	SD	.84	.90	.86	.87	.90	.91	
Popularity	X	2.27	2.41	2.49	2.39	2.65	2.44	26.12
	SD	.64	.69	.71	.64	.71	.78	
Understanding of Others	X	2.50	2.72	2.88	2.60	2.75	2.92	37.88
	SD	.69	.71	.72	.73	.73	.77	
Math ability	X	2.32	2.61	2.07	2.50	2.10	2.09	66.33
	SD	.89	.93	.90	.92	.90	.96	
Conservatism	X	2.26	2.29	2.20	2.31	2.25	2.17	4.26
	SD	.65	.74	.74	.70	.77	.83	

Table 12--page 2

Student Characteristics		VPI Scale Peaks						F
		Real	Int	Soc	Conv	Ent	Art	
Personality and Attitudinal Scales								
Preconscious Activity(Originality)	X	15.14	17.86	16.94	12.84	14.90	21.87	267.28
	SD	4.46	4.89	4.93	4.22	4.52	5.12	
Dogmatism	X	18.79	17.35	17.18	18.22	17.41	16.97	11.31
	SD	6.00	5.84	5.83	5.60	6.04	5.77	
Academic Type	X	4.15	4.84	4.63	4.23	4.21	4.83	24.90
	SD	1.85	1.99	1.98	1.93	2.01	1.91	
Vocational Type	X	5.41	4.79	4.81	5.63	5.33	4.19	62.33
	SD	1.61	1.74	1.79	1.64	1.62	1.88	
Non-Conformist Type	X	3.07	3.25	3.14	2.95	3.38	3.74	16.54
	SD	1.69	1.74	1.71	1.59	1.65	1.85	
Collegiate Type	X	4.35	4.37	4.56	4.59	5.05	4.17	20.68
	SD	1.88	1.92	1.83	1.84	1.80	2.01	
Interpersonal Competency	X	10.24	10.97	11.78	10.72	11.86	11.37	28.68
	SD	3.21	3.43	3.36	3.29	3.37	3.54	

Table 13

A Psychological Classification Scheme for Vocations and Major Fields (Men)

Major Field or Vocation

Realistic Class

- Agricultural Science
- Architecture
- Civil Engineering
- Farming
- Forestry
- Geography
- Industrial Arts Educ.
- Industrial Engineering
- Mechanical Engineering
- Trade & Industrial Educ.

Intellectual Class

- Aeronautical Engineering
- Anthropology
- Astronomy, Astrophysics
- Biochemistry
- Biology
- Botany
- Chemical Engineering
- Chemistry
- Dentistry
- Electrical Engineering
- Engineer'g; Gen'l, Other
- Engineering Sciences
- Geology, Geophysics
- Mathematics Educ.
- Math., Statistics
- Medical Technology
- Medicine
- Metallurgical Eng.
- Military Service
- Natural Science Educ.
- Oceanography
- Other Biolog. Sci. Fields
- Other Health Fields
- Pharmacy
- Physical Therapy
- Physics
- Physiology
- Veterinary Science
- Zoology

Social Class

- Clinical Psychology
- Counseling & Guidance
- Education, General & Other Specialties
- Educ. of Excep. Children
- Educational Psychology
- Elementary Education
- Exp. & General Psych.
- Foreign Language Educ.
- Foreign Service
- General Social Sciences
- History
- History Education
- Ind. & Personnel Psych.
- Physical Educ., Recreation & Health
- Social Work
- Sociology
- Theology, Religion

Conventional Class

- Accounting
- Business Education
- Finance

Enterprising Class

- Economics
- Law
- Management
- Marketing
- Other Business & Comm.
- Political Science
- Public Administration
- Public Relations
- Purchasing
- Sales

Artistic Class

- Art
- Art Education
- Drama
- English, Creative Writing
- English Education
- General Humanities
- Journalism, Radio-TV, Communication
- Literature
- Music
- Music Education
- Other Fine & Applied Arts
- Philosophy
- Speech

Table 14

Prediction of Final Vocational Choice from First Vocational Choice (Fall Sample, Men, N=1359)

1st Vocational Choice	Real	Int	Soc	Conv	Ent	Art	Und	% Hits	No Res	N
	Final Vocational Choice									
Realistic	106	13	4	1	12		14	67.9	6	156
Intellectual	31	355	21	14	29	8	57	67.6	10	525
Social	3	8	110	1	12	3	19	68.8	4	160
Conventional		1	2	42	7		7	71.2		59
Enterprising	4	5	15	10	155	4	32	67.1	6	231
Artistic	1	2	8		6	48	10	63.2	1	76
Undecided	4	14	13	4	18	4	53		1	111
No Response		10	8	5	8		9		1	41

Table 15

Prediction of Final Vocational Choice for Students Whose First Two Choices Fall in the Same Class (Fall Sample, Men, N=586)

1st & 2nd Vocational Choice	Real	Int	Soc	Conv	Ent	Art	Und	% Hits	No Res	N
	Final Vocational Choice									
Realistic	36	2	1		6		1	76.6	1	47
Intellectual	18	239	5	4	10	4	21	78.1	5	306
Social			47		3	1	9	78.3		60
Conventional				12	2			85.7		14
Enterprising	1		2	2	69	2	9	78.4	3	88
Artistic			3		3	22	1	73.3	1	30
Undicided		4	1		2	1	5			13
No Response		9	3	3	6		7			28

Table 16

Prediction of Final Vocational Choice from VPI High-Point Code
(Fall Sample, Men, N=1359)

VPI High-Point Code	Final Vocational Choice Real	Int	Soc	Conv	Ent	Art	Und	% Hits	No Res	N
Realistic	43	28	9	7	8		17	37.7	2	114
Intellectual	70	282	45	9	43	14	70	51.4	16	549
Social	8	32	78	9	34	11	37	36.8	3	212
Conventional	11	19	4	33	23		13	31.4	2	105
Enterprising	9	16	17	18	98	2	29	50.8	4	193
Artistic	8	31	28	1	41	40	35	21.5	2	186

Note.--To make single predictions from the VPI, it was necessary to omit students whose two highest scores were tied. This occurrence then necessitated the omission of students with tied profiles from the tables of expressed choice so that the comparisons of the VPI and expressed choice are based on identical samples. If, however, "expressed" choice predictions are based on all students (with and without VPI ties), the differences in predictive efficiency shown in Tables 3, 6, and 9 vary only 1 per cent or less.

Table 17

A Psychological Classification Scheme for Vocations and Major Fields (Women)

	Major Field or Vocation	
	Intellectual Class	
Agricultural	Chemistry	Other Biol. Sciences
Architecture	Math., Statistics	Physics
Biochemistry	Medicine	Veterinary Medicine
Biology	Natural Science Educ.	Zoology
	Social-Intellectual Class	
Clinical Psychology	Medical Technology	Physical Therapy
Dentistry	Nursing	Political Science, Govt., International Relations
Exp. & General Psych.	Other Health Fields	Theology, Religion
Mathematics Educ.	Pharmacy	
	Social-Conventional Class	
Business Education	Clerical, Office Work	Secretarial Science
	Social-Enterprising Class	
Educational Psych.	Purchasing	Sales
Management, Bus. Ad.		
	Social-Artistic Class	
Counseling & Guidance	History Education	Physical Educ., Recreation & Health
Educ., General & Other Specialties	Home Economics	Public Rel., Advertising
Education of Exceptional Children	Home Economics Educ.	Social Science
English Education	Housewife	Social Work, Group Work
History	Law	Sociology
	Modern Foreign Language Education	Speech
	Conventional Class	
Accounting		
	Enterprising Class	
Marketing		
	Artistic Class	
Art	Journalism, Radio-TV, Communication	Modern Foreign Language
Art Education	Library Science, Archival Science	Music
Drama	Literature	Music Education
English, Creative Writing		Other Fine & Applied Arts
Foreign Service		Philosophy

Table 18

Prediction of Final Vocational Choice from First Vocational Choice
(Fall Sample, Women, N=1386)

	Final Vocational Choice											
1st Vocational Choice	Int	Soc Int	Soc Conv	Soc Ent	Soc Art	Conv	Ent	Art	Und	% Hits	NR	Total
Intellectual	54	19	2	2	18	2		4	15	42.5	11	127
Social Intellectual	10	183	3	6	42	1	1	10	7	66.3	13	276
Social Conventional			17		1	1			3	73.9	1	23
Social Enterprising			2	8	10	1	1			34.8	1	23
Social Artistic	4	20	4	4	553	1		25	37	83.8	12	660
Conventional	2		1		1	5				55.6		9
Artistic	1	3	2		34			73	19	52.1	8	140
Undecided	1	7	1	1	28			11	24		12	85
No Response	5	4			16			2	7		9	43

Table 19

Summary for Spring Sample

	% Correct Predictions	
Kinds of Prediction	Men (N=1773)	Women (N=2336)
Expressed Vocational Choice--Total	68.7	78.2
VPI--Highest Scale	45.1	59.6
Expressed Vocational Choice--Same	82.5	86.4
Expressed Vocational Choice--Different	64.2	71.9

Table 20

Predicting Vocational Choice from First Two Vocational Choices and Preferred Vocational Role (Fall Sample)

Voc'l Choice	Und., Oth., NR		Pract.		Teacher		Leader		Research.		Consult.	
	f	% hits	f	% hits	f	% hits	f	% hits	f	% hits	f	% hits
Preferred Vocational Role, Men (N=1207)												
1st & 2nd Same												
Real	8	75.0	18	83.3	1	0.0	4	75.0	9	66.7	7	85.7
Int	54	70.4	94	84.0	18	83.3	9	33.3	120	80.8	11	63.6
Soc	11	54.5	25	80.0	11	90.9	5	80.0	4	100.0	4	75.0
Conv	3	66.7	5	100.0	1	100.0	0	0.0	1	100.0	4	75.0
Ent	19	78.9	35	85.7	1	100.0	21	85.7	2	0.0	10	50.0
Art	4	50.0	20	70.0	1	100.0	3	100.0	1	100.0	1	100.0
Total		69.7		82.7		84.9		73.8		79.6		67.6
1st & 2nd Different												
Real	31	58.1	42	66.7	6	66.7	12	75.0	12	50.0	6	83.3
Int	75	48.0	77	55.8	19	47.4	13	46.2	29	58.6	6	83.3
Soc	25	52.0	32	75.0	13	84.6	14	50.0	9	22.2	7	85.7
Conv	17	47.1	12	75.0	0	0.0	2	0.0	1	100.0	13	92.3
Ent	47	51.1	52	63.5	3	66.7	22	68.2	5	60.0	14	64.3
Art	18	50.0	14	57.1	10	70.0	1	100.0	2	50.0	1	0.0
Total		50.7		63.3		64.7		59.4		51.7		78.7
Women (N=1258)												
1st & 2nd Same												
Int	7	42.9	12	83.3	2	50.0			17	64.7		
Soc-Int	22	95.5	55	81.8	7	71.4	5	80.0	11	90.9		
Soc-Conv	2	50.0	5	80.8	3	100.0					1	0.0
Soc-Ent			1	100.0	1	0.0						
Soc-Art	48	79.2	194	92.3	41	80.5	29	89.7	5	60.0	21	95.2
Conv	1	0.0										
Ent												
Art	9	55.6	17	64.7	8	75.0	1	100.0			3	0.0
Total		76.4		88.0		77.4		88.6		72.7		80.0
1st & 2nd Different												
Int	27	14.8	26	53.8	3	0.0	1	100.0	27	25.9	5	60.0
Soc-Int	40	42.5	74	68.9	19	36.8	24	50.0	13	61.5	6	50.0
Soc-Conv	2	50.0	8	75.0	1	100.0					1	100.0
Soc-Ent	1	0.0	10	30.0	2	0.0	4	75.0			4	25.0
Soc-Art	93	74.2	140	84.3	34	73.5	28	82.1	11	63.6	16	75.0
Conv	6	66.7	1	100.0			1	0.0				
Ent												
Art	30	30.0	42	61.9	13	38.5	4	75.0	2	0.0	11	63.6
Total		52.3		72.8		52.8		67.7		41.5		62.8

Table 21

Prediction of Final Vocational Choice from Student's VPI Profile and Role Preference

VPI Profile						Samples (Males Only)		
Consistency		Homogeneity		Preferred Role		Fall % Hits	Spring % Hits	Fall-Int. % Hits
C	+	Hi	+	Explicit	=	51.8	53.4	68.2
C	+	Hi	+	Ambiguous	=	33.3	39.5	46.4
C	+	Lo	+	Explicit	=	44.2	45.0	51.2
C	+	Lo	+	Ambiguous	=	31.8	39.1	27.1
I	+	Hi	+	Explicit	=	52.2	53.0	54.4
I	+	Hi	+	Ambiguous	=	26.2	32.1	30.0
I	+	Lo	+	Explicit	=	45.0	37.3	47.5
I	+	Lo	+	Ambiguous	=	25.6	28.9	19.4

Note.--N's were omitted to facilitate interpretation of table. In table 28, the eight, fall subsamples range in size from 42 to 330; spring subsamples range from 56 to 509; and the fall subsamples of students who peak on the Intellectual Scale of the VPI range from 28 to 157.

Table 22

The Correlation (Rho) between the Shape of the College Profile (EAT Code) and the Stability of Student Vocational Choices in the Corresponding Areas of Choice

Spring Sample

College	Men	Women
A	.03	.35
B	.11	-.35
C	.84*	1.00
D	.64	--
E	.16	1.00*
F	.14	1.00*
G	.20	1.00
H	.41	-.50
I	-.47	-.50
J	.94**	.80
K	-.07	.80
L	.21	.50
M	.24	.88
N	-.54	.80
O	.47	1.00
P	-.03	-.40
Q	.16	1.00
R	.14	.95
S	-.03	.80
T	.26	.80
U	--	.00
V	--	.13

Fall Sample

College	Men	Women
A	.71	.85
B	.03	.65
C	.09	--
D	.20	1.00*
E	.20	.80

Note.--The significance levels for women vary because the number of vocational classes at individual colleges varies from two to four. For men, the number of vocational classes always equals six so that all rhos are based on an N of six.

* $p < .05$

** $p < .01$

Table 23

The Correlation (Rho) between the Rank of EAT Environments and the Rank of the Stability of Corresponding Vocational Choices

	Spring Sample				Fall Sample			
	Men	f	Women	f	Men	f	Women	f
Real E vs Real VC's	.45*	20	--	--	.67	5	--	--
Int E vs Int VC's	-.01	20	.80**	19	.47	5	-.30	4
Soc E vs Soc VC's	.29	20	-.06	21	.70	5	1.00*	4
Conv E vs Conv VC's	.32	20	.51*	9	.36	5	.74	4
Ent E vs Ent VC's	.01	20	--	--	.86	5	--	--
Art E vs Art VC's	-.33	20	.22	21	-.58	5	.81	4

Note.--f's equal number of colleges, not students.

* $P < .05$, one-tailed test. For N of 20, $P < .05$ = Rho of .377

** $P < ..01$

Table 24

The Correlation (Product-Moment) of Stability of Student Vocational Choice with Homogeneity and Size of an Institution

	Spring Sample		Fall Sample	
	Men (N=20)	Women (N=21)	Men (N=5)	Women (N=4)
Homogeneity	.22	.60**	.68	.23
Size	.39	.24	.61	-.86*

Note.--Percentages were transformed by arcsin function to render distributions of percentages more normal. N = number of colleges, not student.

* P $<$. 05, two-tailed test

** P $<$. 01, two-tailed test

Vocational Development: The Disadvantaged

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In thinking of the target population of my remarks - the disadvantaged - I became aware of the changes in counseling curriculum which reflect the changing concern for this population. In 1947 we were concerned with social class level and with the impact of socio-economic forces on career development. But in 1947, in considering the disadvantaged or unemployed youth, we looked back at the depression days for perspective.

Now in the middle of the greatest economic growth of our country, we have coming forth again the problem of disadvantaged youth. In spite of general affluence we have disadvantaged people. This then requires a new perspective, although it is very difficult to abandon ways of thinking about the disadvantaged which come from what I think is an inappropriate and different period of time.

Definition. I do not propose to pursue a detailed discussion of the definition of the disadvantaged, but I do want to deal with some of the more salient problems in the area. I would like to start with the concept of disadvantaged as essentially a relative one.

It is not helpful to describe large groups of people who are in lower socio-economic status or are poor, or are Negro, because if we had this kind of data and did not have historical perspective we would not recognize that 20 years ago people with the very same characteristics that are now being labled disadvantaged fit perfectly into our occupational structure. People with 3rd, 4th, and 5th grade reading levels were able to participate very effectively in the occupational world. So rather than focus on individual ascribed characteristics of the disadvantaged, with a long list of traits such as low motivation, poor academic background, etc., we must recognize that "disadvantaged" is a relative concept that has evolved almost under our very noses.

Phenomenology. I now move from this large socio-economic definition to a concern with phenomenology of the disadvantaged, i.e. the extent to which becoming disadvantaged has an impact on self-concept, and what is more, a bewildering impact. As indicated, Negroes as a group had been able to function adequately and fit easily into the occupational structure in 1947 and 1948 when the occupational structure was less skilled. This made it possible for people, sometimes with fewer assets than we now have, to function.

The unemployment rate of teenage-out-of-school youth is double the national percentage of unemployment - about 7 or 8 percent, and double that for Negroes.

The census data of 1962 show the rate of unemployment for 14 to 19 year old white youth to be 12.3% and for the same age group of Negroes, 20.7%. In 1948, the relative rates were 8.3% for whites and 7.6% for Negroes. So in 1948 the rate of Negro youth unemployment was lower than for whites. Twenty years ago it was still possible to absorb unskilled, untrained youth, and in the post war boom it was possible that there was even a premium on unskilled out-of-school Negro youth who were more readily usable in that kind of labor market.

Just as an apartheid law in South Africa classifies someone as subject to segregation and thus changes the nature of the ascribed status of that individual, the effect on the self-concept of the American Negro has been just as drastic in the period of the last 10 to 12 years. They are a people converted from one kind to another, from a people who were functioning to a people who are now marginal. A case history in process is the group of Negroes of the Mississippi Delta who, because of minimum wage laws and advances in agriculture, were changed from a people who were functioning (albeit on a subsistance level) to almost non-functional, forced to migrate to the north and herded into the slum areas. In a very short time they had to change a way of life almost as drastically as the South Africans. They were now seriously disadvantaged in the large urban environment, unable to cope with the tremendous demands put on them, and with very unclear lines as to what governed their lives and what kind of goals they could set.

The American Negro is primarily the product of a 300 year training program--a training program in which he has been trained not to aspire, not to hope or to think. And when he is exposed to the ninth grade guidance counselor, the rules are very hard for him to understand. The terms of competence, personality, phenomenology, and the whole range of factors and variables essential in understanding personal and career development are different.

My comments are restricted to the American Negro because the literature is more extensive. But these comments also apply to other groups such as the Appalachian white. This group is confronted with basically the same variables. A people who were functioning are now disadvantaged, and in fact they find it even more difficult to adapt to urban life. In some cities they are even a greater problem than the Negro ghetto-Chicago for one, or Cleveland where there is an un-reconstructed group of Appalachian whites who are almost impermeable. But even if they are Detroit factory workers, who have been reconstructed or retreaded three times in the last 20 years, the point is that the definition of disadvantaged is a shifting one with the continuous possibility that people who are currently functioning well will slide into this new class of disadvantaged in the near future.

This problem confronts us with certain theoretical, philosophical and fundamental questions. Many of the terms we use, the very glossary of vocational and career development used in counselor education, along with concepts of free will, choice, and decision making, are at stake in our understanding of what it is that gets people into this group called disadvantaged.

We must also note that the disadvantaged group is not necessarily and entirely a group of slum dwellers. Nor are they necessarily poor or poorly educated. Nor have they all characteristics of low motivation or other conditions which isolate them from the normal occupational structure. Many of the disadvantaged are the older people, in their late thirties, who cannot be retrained into the kinds of openings that are now available As you may recall, in Harrington's The Other America, he includes the sick, ill, and elderly. The disadvantaged include more than only the Negro, Puerto Rican, Mexican slum dweller in our large cities.

Because we range from large macrocosmic descriptions of whole groups to self-concept and the implications for free will and choice in understanding what is happening to one, it may appear that my whole approach is essentially deterministic. I am in effect making a case which says that because of the overwhelming changes through which these individuals have passed, the essential factors to be understood in the career development of this group lies outside the individual himself. Essentially he has no control over these factors.

This then raises the question of the relevance of many of the theories of education and social change. What we are confronted with is the extent to which people have been affected by large social change and then the extent to which they are capable of engaging willfully, knowingly, and actively in changing their fate. And furthermore, we are concerned with then participating actively in some kind of relationship with a teacher or counselor.

Taking the most seriously deprived of all, the American Negro, we have not only the problems of economic deprivation, but also the label of being inferior (which they have frequently accepted themselves). There is the double problem of not only being unable to adapt to changes, but also not having been an adequate member of the original social order to begin with. This is different from the Detroit factory worker who has a chance if he gets through the readaptation; he may get a break. But the Negro may not even get the training, much less the job due to the effects of the caste status he has been assigned.

The literature of the drop-out shows us clearly that the drop-out has a significantly more serious problem in getting a foothold in the labor market, white or Negro. But what we are now finding in New York City is that the problem of youth unemployment is even more serious for the high school graduate. The high school graduate from a general course with no training and nothing really to offer is becoming increasingly more serious.

The conflict is even greater for him partly because a high school diploma is used for hiring on many jobs where it is entirely unnecessary. This does not make it any easier for the person who has a diploma to move into a temporary unskilled job with no training.

The effects of compensatory programs or enrichment programs has been limited. The most significant study of compensatory programs, the Coleman Report on equality of educational opportunity showed that minority group youth do tend to profit from certain improvements. But by and large, the single most important variable in determining the final educational product happens to be the family origin. Super has also pointed out the significance of socio-economic status or origin as a determiner.

This is not deterministic but involves a realistic understanding of the set of variables which are commonly used to describe these people. We must look at the phenomenology of the disadvantaged and recognize them as perceiving, cognitive, feeling people who know and understand all the things that I have been describing to you. They do not need research reports, correlations, and analyses of variance to see very clearly what happens to their children, and to their parents. We see and they see the results for the disadvantaged child.

What we get is clear evidence again and again that young children enter school bright, cheerful, and alert; by the time they move to adolescense they are dull, apathetic, and uninvolved. Around the world these things exist in communities where a clear caste system exists and where some are being deprived and some priveleged--in a school in Harlem or in Africa. We see sliding scales of IQ for example. The mean IQ for the entire group continues to stay at a normal level, but from the first grade to grade 5 the mean IQ of Negro children goes down. And all the regression equation in the world are absolutely irrelevant to the way in which the parents and the children understand this phenomenon. They know it is happening. The impact is loss--not only of competence but loss of hope.

With the loss of compentence and hope come the characteristics commonly used to describe the disadvantaged youth - dull, listless, uninvolved, and most of all unmotivated (whatever that means). I submit that these characteristics are frequently used, at least subtly, as if they are the fault of the people who have them.

But disadvantaged people have tuned in very accurately on the signal system. They understand very well what economic, social, and power forces are. And when you see dull, listless, fantasy- and illusion-ridden, unrealistic youngsters, you see people who have adapted. When we use the phrase which occurs again and again, "poor self-concept", we can only say that they have adjusted. It is better to have fantasy and be unrealistic.

Some of the realities from which these characteristics may stem can be seen in our educational policies. For example, in one segregated school all of the text books discarded in the white school were sent to the Negro school. The students who were in that school are now in the last stages of their secondary education. Another example, in one of the finest vocational schools in Chicago, as it increasingly became an all Negro school, all the best vocational trades were removed and now all the training available there is of the low level trades.

In another city there are two large vocational high schools; one is a former Negro school and the other a former white school. The only difference in these two excellent and identical plants is that the former white school is the place where you can get the "cream of the crop", the very best trades.

Another problem is that Negro machinists are never hired. If they are in a training course for machinists, they will leave the training program because of a good job in a semi-skilled trade. They never get through the whole course because there is nothing facing them. That is in 1967.

Social System. Where does phenomenology begin and social reality end? I submit that the young people who are dull, listless, and apathetic are young people who know everything we are talking about. They are highly cognitive, perceiving individuals, who adapted to the circumstances.

Then how relevant are our typical theories of occupational choice and development? We all know the theory of Bordin, Nachmann and Segal (1963). I quote from their work:

> There is however one sharp limitation to our interests: our theory does not deal with and our research can relate only peripherally to people who are motivated or constrained mainly by external forces. Certainly economic, cultural, geographic, and other external factors can exercise a severe limitation on freedom of choice and are outside the main structure of our theory (p. 110).

While these three people are involved in a most fascinating theory, the fact remains that it is obviously irrelevant to the kind of people we are talking about.

Let me turn from psychologists talking about this (because by implication they are saying what we are doing is irrelevant) and turn to a sociologist writing in the field of work, Harold Wilensky. Wilensky talks briefly about the definition of a

Wilensky. Wilensky talks briefly about the definition of a

career as a succession of related jobs arrayed in a hierarchy of prestige through which persons move in an ordered sequence, invoking Manheim's concept of "life plan". But Wilensky points out that most men never experience the joys of life plan because most of the work situations do not afford the necessary stable progression over a work life. He is not talking about just disadvantaged but "most men". He goes on to note that there is a good deal of chaos in the labor market, chaos intrinsic to urban industrial society.

Rapid technological change which makes old skills obsolete, makes demands for new ones. A related decentralization of industry displaces workers creating a power flux of depressed areas in prosperous economies. Metropolitan deconcentration shifts the clientel of service establishments sometimes smashing or reconstructing careers. Recurrent crises such as wars and recessions, coupled with acceleration of fad, fashion, and consumption, adding local unpredictability to the whole. In construction, entertainment, trucking, maritime, and agricultural industries, employment relationships are typically casual. In food processing drastic seasonal curtailments are common . . . . It is apparent that the vast majority of the labor force is going nowhere in an unorderly way. One can expect a work life of thorough unpredictable ups and downs.

The relevance of this to the large sample that Wilensky may be addressing himself to is open to considerable research, to which he has obviously contributed mightily. Even if these generalizations are not as applicable to the whole group he is talking of, they are very applicable to the disadvantaged. The industries he mentions are ones in which we find many of the so-called disadvantaged. All this is easy to see among populations that are depressed, deprived, or marginal. Basic concepts of linear, orderly, continuous progression which are inherent in our theories may not exist for them.

Several years ago LoCascio (1964) addressed himself to the whole question of delayed and impaired vocational development. I place the emphasis on development with delayed and impaired as the key words (they are wonderful euphemisms for large-scale atrophy.) We are talking about huge numbers of people who for any number of reasons have remained undeveloped--at best underdeveloped.

The question: What has been the developmental process? Who have been the developmental agents? In talking about this I invoke emotion and the social commentators rather than just research because I feel that for a better understanding of the disadvantaged, the research literature is suggestive and interesting but largely irrelevant. We are talking about problems of free will and choice and of a group of individuals who have developed a way of thinking

and of a group of individuals who have developed a way of thinking

and feeling. Whereas the literature is really talking about people who have had somewhat different experiences--experiences which make it possible to engage them in discussions of decision making. But the terms of reference for our group are as different as if we were to give the TAT to a group of Australian Bushman.

Intervention. Finally, we are confronted with the ultimate question which all of us who are counselor educators or helpers of people need be concerned with: WHAT IS THE STRATEGY FOR INTERVENTION?

David Ausubel has said that the central issue in all the discussions of disadvantaged is the question of reversibility. Looking at theories of cognitive and developmental processes which stress optimal and critical periods of development, confronts us with the question of whether or not large groups of people in whom certain kinds of traits, learnings and characteristics have not been developed, have passed forever the "golden age of optimal development?" Can we ever intervene again and reverse the effect of all this deprivation?

Research gives us a range of viewpoints on critical motor and maturational developments. For example, Bloom's (1964) study of stability and change in human characteristics says that there is a time table in which the residue of possible change increasingy disappears so that three-quarters of all development, intellectual development, takes place approximately by the age of six, and that after that it is a declining curve. By the time the person is ten

after that it is a declining curve. By the time the person is ten

or eleven a tremendous amount of development has taken place. When we get to the groups we are dealing with (adolescent and young adult who has been seriously deprived) the volume of deprivation and the problem of reversal is confounded.

If we change the labor market characteristics and hiring policies to make opportunities available, we still have people who cannot function in these settings. If we try to train them for this we find that they do not have the antecedent traits and characteristics to make use of training. So the question is where do we begin our retraining? The Manpower Training Development Act which started as vocational training has had to go all the way down to the basic education.

In dealing with reversibility, we find we are becoming "gimmicky"; everybody has a gimmick for making a rapid change; everybody is a Pygmalion. They are doing it with machines, with psychotherapy, with numerous combinations. It represents the best willing people, but I think it must reflect on a somewhat unrealistic professional self-concept to think that we can so quickly reverse, not the effects of a lifetime of deprivation, but literally (with reference to the Negro) a 300 year training program which has made him almost immune to the reversibility process. When we confront the problem of reversal, we really mean redevelopment.

Again these problems and questions are not restricted to local groups. In one study in which I am engaged in Israel, there are a group of North African (Moroccan) adolescents who have not been able to profit from school and who by the age of 12 to 13 show almost the same symptoms and behaviors as our inner city deprived adolescents. They are also the result of a training program because the Moroccan Jews were largely immune to the learning orientation of the larger Jewish community. They were largely a low-status, deprived, enclave in the Moslem community of North Africa. And they developed many of the same characteristics, problems, attitudes toward learning, and poor ability to deal with symbols that characterize practically any group I have ever worked with in the States.

able to profit from school and who by the age of 12 to 13 show

So I turn in our search for understanding again to the way in which young disadvantaged people receive their situation and how they cope with it. Jules Hand an anthropologist, has written of the problems of the American culture and particularly the impact of highly bewildering events. In an article entitled "White Peoples Time and Colored Peoples Time" he reports on an inquiry of the way in which Negroes in general conceive of time. He then goes on to discuss the extraordinary paradox of extreme realism accompanied by tremendous fantasizing, illusion, bragging and showing-off, with a prevalence of dreams. How else could one accommodate to the plight of a fantastically contradictory and victimizing society? He tells me a lot more about the phenomenology of the group we are talking about than most of the self-theories in counseling.

Margaret Mead discusses the dynamics of rapid cultural change.

Margaret Mead discusses the dynamics of rapid cultural change. When she returned to the South Seas 25 years after her first study, she found the Islanders, after Japanese and American occupation, had catapaulted from the Stone Age to Modern Age. In one generation they had been transformed. She comments on this in her book, *New Lives for Old*:

> However much it had become clear that change was not inevitable, that it would be rapid, we were still trapped in a one-sided picture that something was being *done to* people, and that by insisting on working as slowly as possible and to their own cultural values, we were protecting them and cherishing them.

> So one important contribution of this record of change among the people is it points up the completeness with which the people may want to change rather than merely submit to being changed. It shows culture contact is as active a choice of the immigrants from the Stone Age as it is for the representatives of highly industrialized countries; and it points up the resistence to giving in in the members of more developed cultures, as well as the resistence to receiving by the members of the underdeveloped culture. How often has our Western attempt to preserve native dress, old customs, different styles of architecture, to respect native laws and customs, been only a disguise over an unwillingness to admit a people newly entering into our way of life to a full participation in a culture which we claim to value so highly. We want them to go to school, but we don't want too many of them to become aspiring white collar workers. We want people of other countries, as well as racial, ethnic, and economic enclaves, in our own countries, to improve their standards of living, have better nutrition and running water, to be clean; but not to get into our dances, join our clubs, etc. Resistence in the grudging and selective giver turns out to be as important as resistence and begrudging in the selective receiver. . . . "The situation in which children are taught by individuals whose full status (as men or members of exclusive races) they cannot hope to attain makes the goals held up to the pupils seem not the wonderful opportunities that they are presented with. So what children learn very quickly is constriction, not wishing, fantasizing, etc.

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is constriction, not wishing, fantasizing, etc.

While written 10 to 12 years ago, I find this observation to be one of the truest observations of the dynamics of counseling with the culturally deprived.

My purpose has been partly to indicate the general problem, and to serve as a lever not only in understanding the group but of trying to develop a policy of intervention, and to point out that when addressing ourselves to the problem and question of reversal, that there is a great deal of ambiguity about which way we go.

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IMPLICATIONS FOR COUNSELOR EDUCATION

The final products of the workshop participants are provided in this section. They are divided into two main sections, Essential Understandings and Suggestions for Implimentation. While the first section was achieved by synthesizing the work of all four groups, the implimentation section includes the products of only two of them. The suggestions pertaining to the education of secondary school counselors came from the group of participants led by Donald E. Super. Those for the college counselors are the work of the group led by Albert S. Thompson.

Perhaps it is not surprising that the group concerned with elementary school counselors (led by Charles N. Morris) and the one concerned with rehabilitation counselors (led by Roger A, Myers) could not provide a comprehensive list of direct implications.

could not provide a comprehensive list of direct implications.

Though each group worked actively at the task, each achieved the concensus that "it couldn't be done." At least, it couldn't be done at this time. Both groups advanced the hope that the client populations which are their eventual targets will someday become the objects of theory and research in career development.

I. ESSENTIAL UNDERSTANDINGS FOR COUNSELORS

A. The Structure of Society

1. Social Stratification. A primary requirement is the understanding of social class within the context of a total society. How the stratification comes about and how it changes when, for example, an industrial society drastically alters its production methods, are essential concerns. Such concerns must necessarily lead to a viewing of the effects of stratification in terms relevant to individual motivation toward career development: What are the child-rearing antecedants of motives conducive to success in such a society? How do the various strata view the relative importance of work and leisure? What differences occur in the valuing of intrinsic and of extrinsic satisfaction?

Furthermore, when social stratification is altered - or when alterations are desired - education and vocational programs for retraining

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segments of the work force are initiated. The nature, extent, and value of such programs are important issues.

The importance of women in the work force, the changes in their number and rate of participation, and the resultant effects on social organization also deserve attention.

2. Social Mobility. Of equal importance to the awareness of the fact of social stratification is the understanding of the consequences of movement within strata. The nature and extent of intra- and intergenerational mobility is of great moment, especially as the facts are

viewed in relation to national goals, political philosophies and educational practices. With mobility comes various stresses, and the kinds of people who deal successfully with these stresses are legitimate objects of study.

Social mobility also frequently entails or coincides with geographic mobility. The growth and decline of large geographic areas due to relative advantages of labor resources, production methods, transportation and community organization is well recognized. Such changes pose major problems for the society at large and not the least of these is the problem posed for the schools.

Another important consequence of social mobility is the creation of the "marginal man." Insofar as value orientations and typical instrumental behaviors are influenced by social strata and sub-strata, the person in the process moving from one class to another is important to understand. His process of casting off dysfunctional values, acts, and associations in order to identify with a higher status group has critical career implications.

3. Religion and Ethnicity[1]. Influential determinants of commitment and achievement striving have been identified in religions and ethnic background. The degree to which these characteristics affect child-rearing patterns, beliefs about one's ability to master his environment and determine his future, and achievement motives have been studied. Knowledgeable participation in the career development of others requires awareness of these influences.

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[1] See Warkov, pp. 88-113.

4. Disability and Disadvantage. Though career development is viewed against a backdrop of several aspects of the structure of society, for large portions of the population the most salient of these are disability and disadvantage. Whereas social class, upward mobility, religion and ethnicity have variously potent predisposing influences on one's career behavior, extreme economic disadvantage and physical or emotional disability are more often precipitant. Often, self-determination is not a factor in the career behavior of such groups. Demands for satisfaction of survival needs and demands for job skill requirements they cannot meet combine to limit one's opportunity to make choices.

B. The Nature of Work and Career

1. Work in Culture. Although it is seldom viewed as a necessary understanding, the appreciation of the place of work and career in cultural manifestations is highly desirable. Work and career as themes poetry,[2] song, dance, and literature are clearly abundant. Their appearance incidental to central themes is too commonplace to require elaboration. It is proposed that a counselor sensitive to and appreciative of these cultural expressions is better able to interpret the meaning of work roles, their relationships to their social roles, and their possible career consequences to clients. (The workshop participants, despite their knowledge that "his father put a hammer in his hand," could not account for a single Occupations course in which "John Henry" was sung.)

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[2] One workshop participant is engaged in the preparation of a collection of poems about work and careers. Unfortunately the project is too far from completion to be shared at this time.

2. Style of Life. The ways in which work has determined and interacted with one's life style, both historically and currently, are viewed as understandings of primary importance. The near-truisms of work relating to economic circumstance, living place, choice of friends, interest, values, and diurnal activities deserve continued examination. In addition, the newly emerging analysis of life style as expenditure of energy toward goals[3] show considerable promise. Central to this analysis is the concept of commitment[4] to employment, to tasks of personal maintenance, to leisure activities and to free time. The properties and concomitants of commitment have yet to be clearly specified, but topics of special interest include:

1. how do individuals vary in degrees of commitment;
2. what are its antecedent conditions;
3. how regular and transferable - from one class of activity to another - is it; and
4. how does time perception and time utilization contribute to its clarification?

Of equal importance, and suffering from a similar lack of thorough explication, is the life style component represented by the interaction of a given work activity and individual personality variables. Aspects of work satisfaction, amply documented in the literature of vocational psychology, bear an important relationship to this component. Especially relevant is the separation of intrinsic from extrinsic satisfaction and the covariant and compensatory qualities of the two.

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[3] For example, see Segal, pp. 113-127.

[4] The participants were not in complete accord on the value of commitment as a psychological variable. Though two of the stimulus papers, Super's and Segal's, made use of the concept, dissenting participants objected to lack of definition, its unstable time relationships, and its metaphysical connotation.

3. Life Stages and Career Patterns. Primary to all considerations of vocational and career development are the constructions about life stages. No single notion about the general topic has more relevance, more obvious validity, or more heuristic efficacy. Charlotte Buehler's stages of growth, exploratory, establishment, maintenance and decline have been valuable rubrics for several workers. Miller and Form's work periods - preparatory, initial, trial, stable and retirement - have been similarly useful. Of particular interest is the series of life stages constructed by Hershenson specifically for theorizing about vocational development. His stages include socialamniotic, self differentiation, competence, independence and commitment.

Of nearly equal importance to the understanding of vocational development is the concept of career patterns. Miller and Form's characterizations of male career patterns as stable, conventional, unstable and multiple trial are landmarks. Mueller's description of career patterns of women as stable homemaking, conventional career, stable working, double track, interrupted, unstable and multiple trial provided a much needed extension of Miller and Form's base.

4. Occupational Information. Though it is a widely held belief that counselors should have a thorough familiarity with occupational and educational information, the present prescription is for a deeper understanding of its role in the process of vocational development. It is naturally assumed that counselors will be well schooled in the structure and classification of occupations. Knowledge of the contribution of this information to the developmental process cannot be so easily assumed,

however. The expectation that an individual moves through cells of an occupational classification scheme, rather than merely to a cell, requires an altered frame of reference on the counselor's part. Furthermore, the materials for increasing clients' knowledge of opportunity structures must necessarily go beyond classifications. It is viewed as important that the modern counselor be informed about the many new types of media for providing occupational and educational information, including both the materials themselves (software) and the mechanisms for their delivery (hardware)[5].

An appreciation for the problems of timing environmental information, such as problems of sequencing, iterations and intervals, is considered highly desirable. An understanding of the means of evaluating informational materials and an appreciation of the need for doing it is also very important.

C. The Modifying Effects of Individual Differences

1. Essential Constructs. The understanding and appreciation of individual differences begins with the recognition that they are the results, the major effects, of maximizing human potentialities through self-development. Consequently the individualization of developmental experiences becomes the primary consideration for educational, prevocational and rehabilitation programs. Individualized experiences are provided by the curriculum or program; vocational guidance should serve to help the learner gain maximally from the experiences through explication and integration.

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[5]. See Tiedeman and Dudley, pp.

2. Learning Experiences. Optimal learning is achieved when the learning experience is structured so that it is appropriate to the interests and the capacity levels of the learner. When learner and situation are optimally suited, the acquisition of functions, skills and processes permits the learner to increase his capacity to learn other things. Such growth is also aided by previous experiences and the learner's opportunity to verbalize these contemplatively.

Providing developmental learning experiences depends upon, and begins with, the appraisal of individual differences, including testing and other assessment techniques. Appraisal makes possible the identification of positive reinforcing agents and conditions as well as the negative ones.

Of special importance to our society's reward systems is the class of skills and abilities in interpersonal communication. In deficit they can interfere with crucial interactions and seriously impede development. Individual differences in communication skills may pre-empt other differences and mask other similarities. Their appraisal - and remediation when appropriate - therefore is viewed as a matter of primary concern.

3. Occupational Experiences. Attitudes developed in school, in pre-vocational and rehabilitation programs persist and have utility for latter work roles. Pre-work experiences, therefore, should be structured in accordance with individual needs, abilities and interests. Success experiences enhance the learner's ability to deal with future opportunity structures. Consequently, the provision of satisfactory observation and successful participation in various kinds of occupational performance is a valuable activity, especially for the school leaver.

4. Social Needs. The proscriptive effects of man power needs and other social influences must be understood by the counselor. The predetermining influences of social class, religion and ethnicity must be interpreted to, and eventually by, the learner. Differential patterns of performance evidenced in and demanded by the occupational structure must become objects of the learner's awareness. Perhaps the counselor's most difficult and important interpretations to the learner, however, are those that deal with the principles of democratic interaction between social needs and individual differences.

5. Self Awareness. The development of the learner's knowledge and awareness of his own attributes provides an expansive base for the increasing realism of his self-concept. Though variations in maturation affect the learner's awareness of certain attributes, counseling can help him to specify and develop his affective relationships to his own characteristics.

In addition to the facilitative effects of success experiences, cited earlier, failure experiences - properly interpreted - provide the learner with opportunities to experiment and to gain from mistakes. Adequately balancing success experiences with "the right to fail" should create an atmosphere for choice-making activities in a goal-directed context. The learner's understanding of probabilistic information that is derived from individual differences and its use in transcending predicted outcomes, is especially important.

The usual practice of focusing on strengths and assets is viewed as encouraging to further enhancement of individual differences. And the enhancement of such differences should lead to the learner's inner awareness of his individuality in the face of environmental presses.

D. Career Development and Personality Development

1. Development and Life Stages. Though there is no clarity about its course during elementary school years, career development at the secondary school level and beyond is a continuous, somewhat-orderly process understandable in terms of stages, developmental tasks, and task behaviors. Formation of self concept in career development involves both personality and educational development process.

Career development focuses upon an individual who grows and matures in a variety of manners, in several systems. The individual is increasingly aware of vocational implications associated with the activities of the family members. As he proceeds through the educational system he becomes more aware of the vocational implications of class and extra-class learnings and activities. Such implications include, then, the incidental as well as the deliberate learnings of a vocational nature.

Career development stages tend to be derived from life stage theories. Two of the major life stages most applicable to the secondary level are

a. Exploration
   (1) Tentative
   (2) Transition
   (3) Trial

b. Establishment-stabilization
   (1) Trial
   (2) Advancement

Secondary youth appear to develop vocationally through the cycles of planning, exploring and evaluating. Cycles may be repeated with profit.

The counselor's acceptance of the concept of life stages permits:

a. placement of an individual in a life stage;
b. comparison of an individual with others in the same life stage; and
c. analysis of changes in vocational maturity throughout two or more life stages.

Vocational development tasks characterize life stages. Some of the tasks and behaviors associated with the tasks have been identified, described and explained and may be used for the assessment of vocational maturity.

But most importantly, career development for the individual involves the development of a vocational identity through differentiation and integration of the personality. The process involves ideas, feelings, expectations and aspirations, satisfactions, motivation, goals and various types of interaction. These are also ingredients of personality development.

A self concept theory of career development involving the elements of formation, translation of self concepts into occupational terms, and implementation of the self concept obviously involves personality development.

Personality development is explainable in a wide variety of viewpoints, from psychoanalytic to behavioristic approaches. Counselors and counselor educators must assume responsibility for adhering to some framework of reference compatible with their own way of thinking and the data relevant to career development.

II. SUGGESTIONS FOR IMPLIMENTATION

A. Secondary School Counselors

1. Counselor-in-training self assessment:
   In order to sharpen the student's awareness of himself as an instrument for action and to try out a variety analysis in a situation where the objective and phenomenological can be compared, the following tasks are recommended.

   a. student self-assessment of educational and work history
   b. student self-assessment of social class membership and social mobility of family.
   c. student self-assessment of aptitudes, interests, and personality
   d. student self-assessment of how well vocational development theories fit him

2. To contrast the phenomenological and objective aspects of vocational development further, the student should also do the above assessments for a person who is quite different from himself. Groups of students should compare their assessments. This assessments should be based upon:

   a. objective reports - school and work history, test information, etc.
   b. interviews with significant persons in the individual's life
   c. an observed or conducted interview with the person himself, reviewing his development

3. Students observe, conduct, and evaluate:

   a. the dissemination and mediation of vocational information by institutions, small groups, and individuals
   b. interviews of persons at various levels of development involving:
      (1) exploration
      (2) planning
      (3) decision-making
      (4) assessment
   c. instruction of persons at various levels of development in:
      (1) career exploration
      (2) career planning
      (3) career-decision
   d. the prediction of vocational development for groups and individuals

- e. the whole range of strategies of intervention for career development
  - (1) varieties of counseling - individual and group - different viewpoints
  - (2) varieties of instruction
  - (3) varieties of environmental modification
  - (4) varieties of community action programs

4. Student research activity:

- a. reading the research literature for selected purposes and reporting back to the student group:
  - (1) research on theory development
  - (2) descriptive studies
  - (3) tests of intervention strategies

- b. Conducting research in local community and comparing with other locales
  - (1) descriptive study
  - (2) test of a theoretical concept
  - (3) test of intervention strategy

5. Student training in computer technology:

- a. training is use of computers - learning computer language
- b. involvement in collection of data, presentation of data, and data retrieval
- c. use of computers in research activity described above

6. Student training in educational technology:

- a. display devices - film strip, tape recorders, television, videotape, projectors
- b. library technology - information classification, storage, access, retrieval devices - computers, microfilm, microfiche, etc.
- c. responsive devices - programmed instruction - books, machines, computers
- d. simulation devices - film tapes, games, computers

7. Student training in measurement as applied to vocational development:

This is usually a separate course, but aspects of prediction, information-giving diagnosis, process-feedback, decision-making, research, selection, and placement uses of measurement devices cannot be excluded from a course in vocational development. There is a problem in proper articulation between two such courses which is usually not solved very well for student understanding and application.

8. Activities of laboratory experience in a course in vocational development:
    - a. interviews
        - (1) demonstrations by faculty and resource persons--one-way vision, videotapes, films
        - (2) edited audio and videotapes to --demonstrate theories, to simulate interviews (eliminate counselor and ask student to be counselor), to demonstrate range of vocational development and varieties of persons
        - (3) student interviews--videotaped, audiotaped--reviewed and discussed
    - b. group activities
        - (1) panel sessions
        - (2) group interviews with students, resource persons (parents, counselors, community leaders, etc.)
        - (3) role playing
        - (4) brainstorming
        - (5) research groups
        - (6) sensitivity training groups
        - (7) planning and problem-solving groups
    - c. community settings - observation and participation by students
        - (1) work settings
        - (2) counseling centers
        - (3) health centers
        - (4) action seminars
        - (5) community programs
        - (6) youth development centers
        - (7) schools

II. SUGGESTIONS FOR IMPLIMENTATION (continued)

B. College Counselors

1. Counseling Process

The goal of counseling is the total development of the individual, including increased awareness and understanding of self, of the environmental demands, and of the factors which facilitate or inhibit development. Vocational development is a form of personal development and the counselor needs to view the client from a developmental rather than primarily from a remediation viewpoint. He helps the client develop more effective methods of problem-solving, reality testing, and relating himself to the vocational demands and opportunities.

Suggestion: A combined counseling and research practicum for fewer units of credit than is usually given should be established, but over a longer period of time (2 or more years). This would involve the counselor trainee in following the developmental pattern of one or more counselees from both a counseling and research framework, under supervision.

2. Counselor Role

It is generally felt that the counselor should expand his role beyond that of the traditional one-to-one relationship. There are several areas designated as of particular significance:

a. Environmental programming, or involvement with the total life-space of the client. One example of this is that of setting up programs to counteract the inhibiting influence of the socio-economic system upon the individual's vocational self-concept. One counselor describes four possibilities of this process as follows:

4

The counselor should be sensitized to the extreme difficulty a student could face in attempting to enter an occupation very different from the family's milieu. The problem is most acute for the disadvantaged. There should be a very strong motivation for such a shift to be successful. Possible techniques which could facilitate such a shift, (in addition to counselor support) could be (1) setting up new social supports such as placing the client in contact with students of similar interests through activity or living groups; (2) augmenting faculty support; (3) enlisting the interest of a person in the community who is in the projected occupation; and (4) establishing a program of part-time or summer jobs which would offer early job-identifications. The difficulties in making a shift in social or occupational class should also be openly discussed.

Suggestions:

(1) The training of counselors should include increased emphasis upon the involvement of the counselor in the life of clients outside of the traditional counseling interview role. Such environmental programming at the college level could include (1) various types of orientation activities, (2) methods of wide dissemination of vocational information, (3) structuring of living groups, and (4) initiation of academic programs designed to encourage exploration. Emphasis upon broader areas of the counseling role implies additional academic training in the areas of social psychology and learning theory.

(2) Practicum training accompanying this broadened counseling role would include experiences beyond the confines of the college counseling center. Other agencies in which a practicum could function include residence halls, academic advisory offices, the student union, and other environs where students more naturally find themselves.

B. Early work experiences

Emphasis on a need for large-scale early work-experience program to develop work habits and identification with work tasks. He should also encourage educational programs which incorporate early experiences related to vocational involvement.

Suggestions:

(1) Using the scale of occupational information suggested by Thompson, (1968) the counselor trainee can familiarize himself with the variety of work experiences potentially available to college students.

(2) In practica, the counselor-in-training can attempt to devise a variety of client work experiences or work models based on client experiences ranging from least to most direct interation with the available world of work.

(3) Research training in this area can focus on determining the effectiveness of various media upon the usefulness of information about work experiences.

(4) Counseling students might also participate as subjects in the development of work experiences. The counselor's own training could include vocational development experiences based on the same principles involved in designing work experiences for clients, and as feedback for other trainees.

(5) Participation in the above experiences should provide the counselor trainee with a number of bases on which to interact professionally with peers and professionals, to encounter a variety of models for professional development, and thus to enhance his own development.

C. Teaching the vocational exploration and decision-making process. It is felt that this is a skill which has value beyond vocational choice.

Suggestions:

(1) Student self assessment of all factors leading to his own vocational identity

(2) Assessment of another person from a different socio-economic background

(3) Determining how technology (computer, educational) could have facilitated the decision points discovered in (a) and (b) above.

(4) Offering a practicum comprised of subjects within the developmental stage of vocational exploration as a group to be worked with as well as studied.

(5) Setting up an inter-university communication medium for circulation of data to counselor educators engaged in practicum and research efforts. Data would come from students' practicum observations and research within (d) above.

D. Making available to clients opportunities for engaging in appropriate developmental tasks. The college counselor's involvement in this area is likely to commit him to participation in decisions affecting both curricular and noncurricular programs as well as the utilization of paraprofessionals in these programs.

Suggestions:

If professional counselors are to make available opportunities for engaging in appropriate developmental tasks, their didactic training should include the body of knowledge commonly referred to as "college student development."

(1) Practica in this area could be conducted in any one or any combination of settings, including but not limited to: admissions office, academic advisory office, student union, residence halls, and fraternities and sororities.

(2) Rather obviously research training could be made available here in terms of identification of the developmental tasks of college students and of the conditions which facilitiat students' engaging in these tasks.

(3) Since counselors-in-training are not likely to be very different developmentally from the college students with whom the counselors will be working, the counselors' learning, described in the three immediately preceding sections, should permit their own participation in those tasks relevant to their own personal development. Counselor trainees might even be encouraged to identify tasks which would facilitate their own personal development.

(4) Almost by definition the experiences described above should provide impetus for the counseling student's own development, professionally as well as personally.

E. The more recent advances in computers and other electronic media have many implications for the more efficient and more effective teaching of educational and vocational decision-making. The counselor should be exposed to this technology during his training and should be encouraged to make use of these media in a creative manner. He must also be prepared to evaluate such new techniques both by comparing them with established gridlines and through his own research.

Suggestions:

Counselor training, particularly for college settings, should include at least brief exposure to the technologies of computers and other electronic media. The counselors being trained today will still be employed in the year 2000, when electronic devices will undoubtedly be more common than can even be imagined at present. A counselor who does not understand his field will be increasingly disadvantaged with the passage of time. Training in technology should include didactic and practical experiences in both computer technology and educational technology. The research activities of counselors increasingly involve computer and data processing equipment. Thus direct experience in conducting research using data processing apparatus should also be included in research training activities.

F. Research

Suggestions:

(1) Provide credit for both faculty and students to meet with no requirement for formal evaluation of accomplished work they decide to do. This implements the use of the faculty as a colleague identity model for practicum or research purposes.

(2) Encourage group research projects for counselor trainees rather then individual research work. This makes better use of the dynamics of counselor trainees.

3. Counselor Training: Content

A. Translation of knowledge about society and human behavior from basic theory into educational practice is seen as a four stage process:

(1) Counselors should be thoroughly schooled in the behavioral and social sciences with emphasis given to the individual, human interactional, societal, and environmental factors.

(2) Seminars and interdisciplinary experiences must be provided that allow for meaningful dialogue between the scientist and the educator that demonstrates the application of theory and research into counseling practice.

(3) The counselor trainee needs to be seen as both the subject and object of his training. He is a developing individual in the process of career development. He should be given the opportunity to view career development within the framework of his own development. What factors are involved in his development and what are the influences in his development. He should be given the opportunity to obtain counseling and in other ways develop introspective and self-evaluative skills in order to enhance his own development as well as providing him an understanding of the client's role. Counselors need to be aware of their own value system and expectations and to become sensitive to and understanding of the value system and associated work attitudes of cultural subgroups who may differ from that of the counselor.

(4) Counselors need specific experiences that sensitize them to the sociological environmental (social class, institutions, idio-

syncratic needs of group) and the psychological aspects (individual differences, methods of relating) of the client population with which they will be working. This should involve practica in a variety of settings and using a variety of media.

B. Counselor preparation should make provision for developing competency as a mediation agent in the learning process.

Suggestions:

(1) Didactic experiences

 (a) Appropriate content courses offered in other disciplines

 (b) Developing cooperatively, i.e. interdepartmentally, courses specifically designed to integrate learnings from other disciplines into the counseling framework of activities, objectives and the like.

 (c) Instruction where appropriate should include learning experience wherein self-understanding and examination is encouraged. Various vehicles can be used for this such as developing a personal case history, using interaction analysis techniques, videotape experiences.

(2) Practicum

 (a) Field Experiences in different frameworks and settings

  (1) Intra-field (student personnel), e.g. housing office, disciplining office, admissions office, institutional research projects

  (2) Extra-field settings, e.g. hospital units, court units, VISTA, Youth Corps, etc.

(b) Supervised practica with clients having various socio-cultural identities and background

(c) Exploiting pre- or introductory practicum experiences and exercises such that counseling skills are developed and at the same time self-awareness and examination is emphasized.

(d) Practicum in group counseling which often serves to increase the members' sensitivity to individual differences in identity, background, perceptions, behavior, etc.

(3) Personal development

(a) Providing the trainees with an opportunity to experience counseling as a client

(b) Providing trainees with an opportunity to experience sensitivity training

(c) Feedback from staff on confidential basis re trainee

4. Research needs

Suggestions:

a. Methods and techniques of relating vocational development theory to practice--It is assumed that, didactically, the student will have had background training in conventional sequential methods of research. The training of a counselor should utilize this background and involve the student in applied research in vocational development. This research should focus on problems of interest to the counselor, and not necessarily "limited to" controlled experimental approach. For instance, involving the trainee in implementing a counseling approach and measuring the outcome if it would promote involvement and be a participatory demonstration of applied goals.

b. Training should develop an attitude of inquiry as a catalyst for evaluating existing practice and attempting to implement and evaluate new techniques. A basic requirement for critical thinking is the ability to ask significant questions. Evaluation of old and new techniques provide a vehicle for this approach, as well as practice in using theoretical research methods. Although there are varying requirements for research in different institutions, it is felt that the trainee can be given course instruction in research, particularly as a practicum. A fruitful method suggested is that of the team approach, which can offer variety in the degree of sophistication of the members of the team, as well as kinds of data, and extent of individual responsibility in treating it.

c. Methods of training counselors to become effective users of media--Again, in practical techniques, the ability to ask meaningful questions in relation to theory is basic. To implement this, a counselor must have some degree of facility for working with computer processing, and collecting and codifying data for such analysis. An understanding of the input and output capacity is necessary for both research and service in the student personnel area.

d. Counselors should address themselves to problems of vocational counseling not adequately treated by existing vocational development theory. He should possess the skills to formulate and test questions derived from his own practice and thought. The counselor himself may become a theorist by comparing practical experience and case data with theory. This can be a method for both evaluating theory and stimulating independent thought regarding his own theoretical assumptions.

WORKSHOP RESOURCES

The following is a list of resource materials that became important parts of the two-week Workshop. As the discussions preceded it became apparent that many of the participants had not previously encountered some of these items. Many had, but wanted to review them. Because of their importance to the workshop experience and in anticipation that they might be useful to other counselor educators, the references are provided here.

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